

# Projections and Planning Information

**UPDATES  
FOR  
SAN MATEO COUNTY**

Replace Module D: Projections

**EMPLOYMENT DEVELOPMENT DEPARTMENT**

**LABOR MARKET INFORMATION DIVISION**

FOR QUESTIONS ABOUT THIS REPORT, CALL (916) 262-2162.



# Table of Contents

## **Module D: Industry and Occupational Projections**

Introduction .....	D-1
Descriptions of Industry and Occupational Tables .....	D-3
Industry Trends and Outlook .....	D-5
Table 1: Employment by Major Industry .....	D-6
Table 2: Industry Employment Projections .....	D-7
Occupational Trends and Outlook .....	D-9
Training Level Definitions .....	D-11
Table 3: Employment by Occupational Group .....	D-12
Table 4: Occupations with the Greatest Job Growth .....	D-13
Table 5: Occupations with the Fastest Job Growth.....	D-15
Table 6: Occupational Employment Projections .....	D-17
Table 7: Occupations with the Most Job Openings .....	D-34
Table 8: Occupations with Projected Job Loss .....	D-36
Appendix .....	End
Standard Industrial Classification Manual (SIC)	
Standard Occupational Classification System (SOC)	
North American Industry Classification System (NAICS)	
Projection Methods and Economic Assumptions	
Alphabetical Index of Occupations	



# Introduction to Projections

## Using Projections Data

Projections contained in these tables provide information for estimating job opportunities, developing training programs, and gaining insight into employment trends. However, before reaching any final conclusions, users should consider the following:

*Remember that these data are estimates.* They were developed on the assumption that historical trends will continue into the future. However, events may occur during the seven-year projection period that are impossible to predict. Events such as military base closures, major business closures or openings, and natural disasters can have a major impact on employment levels.

*Do not use these projections as your sole source of information.* Use other more recent sources of local economic data to corroborate the projection data. This information may be found in documents such as those published by the EDD's Labor Market Information Division, local chambers of commerce or economic development agencies.

*Projections employment data are annual averages.* These averages may not accurately portray seasonal occupations or industries such as those found in agriculture, retail sales, recreation and construction.

*Employment levels stated reflect workers who are covered by the Unemployment Insurance program.* As a result, industries that are made up largely of individuals who are self-employed will be understated. Examples include industries such as real estate, hair salons and bookkeeping. Occupations such as dental hygienists and consultants will also show an understated level of employment.

## Industry Projections

Projections by industry forecast the anticipated changes within an industry over time. Forecasts are based on past employment trends and then are refined by a review of current economic developments.

Industry employment projections utilize employment data from both the Current Employment Statistics (CES) program and the Employment Payroll (ES202) program. There is a certain amount of error built into both systems. These errors may include employers classified in the wrong industry, incorrect employment levels reported by the employer and employment reported in the wrong county.

If a major industry category shows a decrease in future employment, it may be that only one or two industry components are experiencing the decline and other components are still expected to hire new workers. It is best to investigate all sectors of the industry. For example, retail trade has several components: building materials and garden supplies; general merchandise stores; food stores; automotive dealers and service stations; and apparel and accessory stores, to name a few.

Geographical differences account for differing employment opportunities. If an individual is considering relocating from one area of the state to another, the size of the industry and its expected growth level need to be kept in mind. Small rural counties will not have the same employment possibilities as do the larger metropolitan areas.

## Knowing Future Industry Trends

- helps economic development professionals foster compatible growth and promote an area's strengths.
- helps government agencies, non-profit agencies, researchers and other interested parties formulate plans and proposals.
- helps people seeking work and those doing counseling and/or job placement learn about employment opportunities in various industries.

## Occupational Projections

Projections by occupation estimate the changes in occupational employment over time resulting from industry growth. Changes in the number, size and type of employers within a geographical area will affect the demand for certain occupations. Also, technological advances or changes in laws or regulations may affect the occupational mix.

General changes in the work place affect some occupations. Jobs may be created, eliminated or consolidated due to restructuring or regulations affecting the requirements for the job. For example, personal computers and word processing programs eliminated many typist jobs, but created a need for word processors.

An occupational title does not give details about the occupation. An individual starting a career search may want to look at the various occupations in this module, choose any that are of interest and then do further research. There are other sources of information for

occupations and their specifics, such as skills and educational requirements, hourly earnings, benefits, working conditions and advancement opportunities.

Occupational staffing patterns used for the projections process are developed from the annual OES Survey of employers. The survey utilizes a sample of the entire universe of Unemployment Insurance (UI) covered employers. Because it is a survey, it is important that the following points be considered:

- There is inherent statistical error as a result of both the sampling process and the level of employer response to the survey mailings.
- OES staffing patterns may contain errors due to problems employers may have in completing the survey. These errors typically include: misunderstanding of survey instructions, misinterpretation of occupational definitions and/or titles contained on the forms, and clerical errors in filling out the forms.
- The employer's response to the survey may reflect conditions that are atypical. They may be experiencing a temporary shutdown, seasonal high or low employment, or a temporary increase in demand for their product or service.

Occupational projections data indicate major occupations and which occupations are likely to offer the greatest number of job opportunities. When possible, the user should focus on larger groups rather than specific occupations. Some occupations may not appear in published tables because of the low number of people employed in that area or because of confidentiality concerns.

Although an occupation may be stable and not expected to grow, this does not mean that there are no opportunities for employment. All occupations have turnover opportunities. Individuals change or leave jobs permanently for varying reasons. High turnover, especially in occupations requiring lower skill levels, would mean that there are frequent openings even though there is little or no growth.

Occupational projections data are prepared for employment and training planners, vocational educators, and others who need information on future employment by occupation. The outlook information can be used in making occupational training decisions and career choices. Employers considering expansion or relocation may find the data helpful in understanding the occupational composition and trends in California and its 58 counties.

#### **Additional Sources of Information**

Additional information on economic conditions in a particular area can be accessed through Labor Market Information Division consultants, who provide information about economic activities within the counties they serve, and EDD One Stop locations, where additional publications and information may be obtained. Other sources include:

- Wage And Salary Employment by Industry
- Occupational Outlook Handbook (BLS)
- California Occupational Guides
- California Association for Local Economic Development
- Chambers of Commerce
- Economic Development Organizations
- Newspapers
- Standard Industrial Classification Manual

#### **Automated Access**

Electronic access to current data is available through the EDD's Internet address at:

**[www.calmis.ca.gov](http://www.calmis.ca.gov)**

For information about the Web site or to order publications, please call (916) 262-2162.

# Description of Projection Tables

**Employment** includes nonagricultural wage and salary workers, except for self-employed persons, unpaid family workers, private household workers, and those involved in labor-management trade disputes. An **industry division** refers to a distinct group of private, public or nonprofit enterprises engaged in producing goods or providing services. With the exception of government, industries are classified by the Standard Industrial Classification (SIC) system. Industries are then grouped into ten major categories according to the economic activity involved:

*Agriculture, Forestry, and Fishing* includes establishments primarily engaged in agricultural production, forestry, commercial fishing, hunting and trapping, and related services.

*Mining* includes all establishments involved in the extraction of minerals, crude petroleum and natural gas, including quarrying, milling and related activities.

*Construction* includes establishments engaged in contract construction, including new work, additions, and repairs performed by general and special trade contractors.

*Manufacturing* includes establishments which are usually described as plants, factories or mills engaged in producing or processing nondurable or durable goods. These typically use power-driven machines and material-handling equipment.

*Transportation and Public Utilities* includes enterprises engaged in passenger and freight transportation by surface, water and air, warehousing and other transportation services. It also includes the communications complex of telephone, telegraph, radio and television; and the utilities providing gas, electric and sanitary services.

*Wholesale Trade* includes establishments involved in selling merchandise to industrial, commercial, farm, construction contractors and professional businesses; retailers; or other wholesalers.

*Retail Trade* includes establishments involved in the selling of merchandise for personal or household consumption and rendering services incidental to the sale of goods.

*Finance, Insurance, and Real Estate* includes banks, savings and loan institutions and security and commodity brokerages, insurance agencies and carriers, real estate

sales and management offices, and rental and planning agencies.

**Services** includes establishments such as hotels, laundries, auto repair shops, theaters, legal services, advertising services, private schools and hospitals, and nonprofit organizations which are engaged in rendering a variety of services to individuals and businesses.

**Government** includes legislative, judicial, administrative and regulatory activities of federal, state, local and international governments; and federal, state and local government hospitals and education. Note also, for the federal government sector, employment includes all civilian employees regardless of the activities in which they are engaged.

## Industry Tables

*Employment By Major Industry (Table 1)* This table shows 2001 estimated employment and 2008 projected employment along with the percentage of total employment for each major industry division.

*Employment By Industry (Table 2)* This table shows estimated employment for 2001 and projected employment by industry for 2008. The SIC code for each group is also listed. The "Employment Change" columns provide the projected change in employment between 2001 and 2008 and the percent change or growth rate over the seven-year period.

**Occupations** are classified on the basis of work performed and required skills, education, training, or credentials. Based on the Standard Occupational Classification (SOC) system, workers are classified at four levels of aggregation: major group; minor group; broad occupation; and detailed occupation. All occupations are clustered into one of the following 23 major occupation groups:

- *Management*
- *Business and Financial Operations*
- *Computer and Mathematical*
- *Architecture and Engineering*
- *Life, Physical, and Social Science*
- *Community and Social Services*
- *Legal*

- *Education, Training, and Library*
- *Arts, Design, Entertainment, Sports, and Media*
- *Healthcare Practitioners and Technical*
- *Healthcare Support*
- *Protective Service*
- *Food Preparation and Serving and Serving Related*
- *Building and Grounds Cleaning and Maintenance*
- *Personal Care and Service*
- *Sales and Related*
- *Office and Administrative Support*
- *Farming, Fishing, and Forestry*
- *Construction and Extraction*
- *Installation, Maintenance, and Repair*
- *Production*
- *Transportation and Material Moving Operations*
- *Military Specific Operations*

### **Occupational Tables**

*Employment by Occupational Group (Table 3)* This table shows 2001 and 2008 employment and projected employment for major occupational groups. The "Absolute Change" column gives the number of job opportunities resulting from the creation of new jobs. "Percent Change" shows the percentage change for each occupational group.

*Occupations with the Greatest Job Growth (Table 4)* This table lists the 50 occupations that are projected to register the largest numerical change between 2001 and 2008. In general, these occupations are numerically large. Some have average projected rates of growth, but because of their employment size will add significant numbers of new jobs over the 2001–2008 period.

*Occupations with the Fastest Job Growth (Table 5)* This table lists the 50 occupations with the greatest projected percentage increases, providing a different perspective to future occupational employment changes. Please note that some of these are increasing rapidly from relatively small employment levels and not necessarily found in Table 4.

*Occupational Employment Projections (Table 6)* This table provides occupational detail for up to 800 occupations. Annual average employment in each occupation is shown for 2001 and 2008. The column headed "Number" under

employment change presents the number of job opportunities resulting from the creation of new jobs. The "Percent" column shows the percentage change for each occupation. The next column, "Separations," shows job opportunities that are created by workers leaving the occupation.

Also included in this table is a codes column, showing the California SOC code for each occupational title. The Alphabetical Index of Occupations section may be used to locate occupations in the detailed table.

*Occupations With The Most Openings (Table 7)* This table lists the occupations projected to register the largest absolute growth and separations between 2001 and 2008.

*Occupations With Projected Job Loss (Table 8)* This table lists the occupations projected to decline over the 2001–2008 period. Declining employment is a sign that the occupation has no growth. However, turnover may result in some job opportunities.

# Industry Trends and Outlook

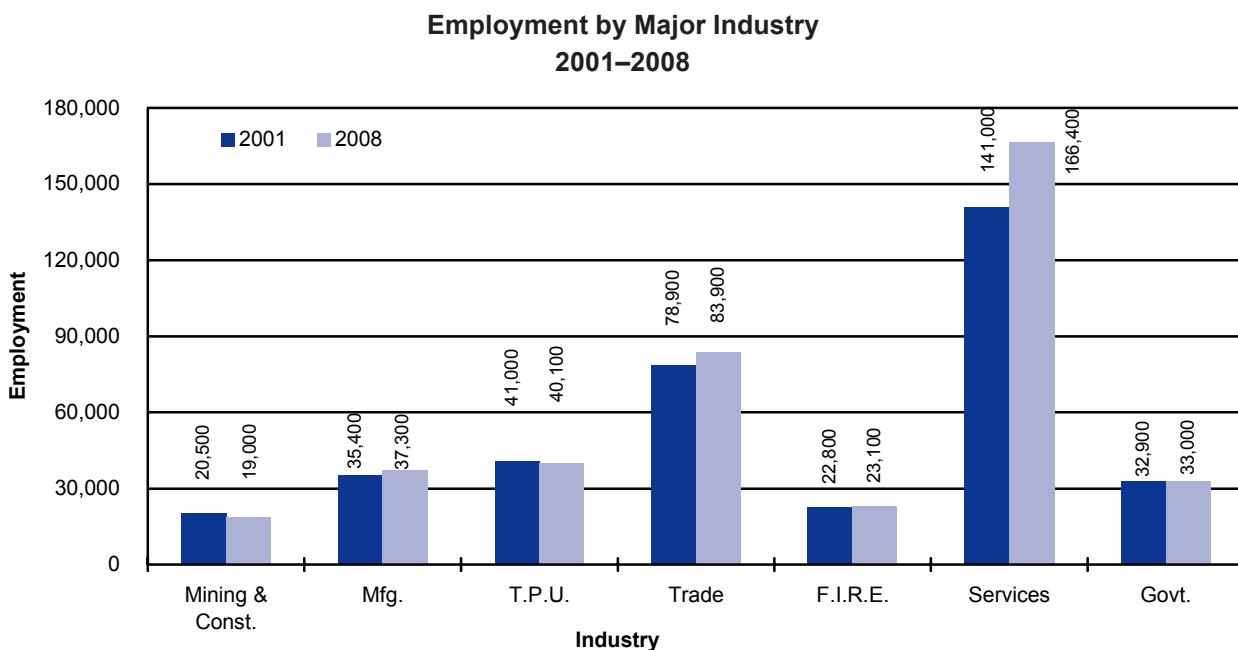
The Employment Development Department (EDD) projects an increase of 30,300 nonfarm jobs at firms located in San Mateo County between 2001 and 2008. Employment cutbacks and a slow recovery in the early part of the outlook period will cause job growth to be less than a third of what occurred during the prior seven years of 1993–2001. Nevertheless, local growth should translate into an overall projected expansion rate of 8.1 percent over the 2001–2008 period beginning in 2001. Services and retail trade—the county's largest industry divisions—will dominate the future job gains. (Please note that the department does not include agriculture in this analysis.)

**Services** will add the largest number of jobs (25,400) in San Mateo County over the seven-year projection period. Business services, which comprised nearly 44 percent of the services industry division total in 2001, will garner just over half of the additional services employment. Despite significant layoffs in the early part of the projection period, the huge software development and computer-related services segment should add the most jobs within business services. Other large business services gains will occur in temporary and other employment agencies, guard and other security services, and in building maintenance and pest control services. Engineering and management services will expand by 4,400 jobs over the seven-year period, with bioscience and other research firms leading

the way. Meanwhile, employment in health services is projected to grow by 2,000 jobs, with the largest absolute increases likely in doctors' offices and clinics; significant gains will also occur at dental offices and clinics, hospitals, home health care services and skilled nursing facilities. The hotels and motels industry and private educational services will each add at least 600 jobs between 2001 and 2008. The expected closure of horse racing operations will temper the employment growth in amusements. The greatest job gains in other services industries will come from lawn and garden services, as well as in residential care, legal and child day care services.

**Retail trade** will gain 6,200 full- or part-time jobs between 2001 and 2008. Restaurants and bars will account for just over 20 percent of the gains. Food stores and many other types of retail establishments will also add jobs to serve the needs of the growing population.

**Manufacturing** will net an additional 1,900 jobs over the seven-year period. The largest manufacturing employment gains will occur in the chemical and analytical, surgical and other instruments industries as bioscience firms expand, move in, or start up in South San Francisco and elsewhere in the county. On the other hand, employment decreases will occur in various durable and nondurable manufacturing industries.



**Finance, insurance and real estate** payrolls will likely rise by 300 jobs, as finance jobs increase modestly. A slight employment gain projected for real estate will offset an expected decline in insurance.

**Government** employment is projected to gain only 100 jobs between 2001 and 2008. Budget problems will cause the job expansion in local government, excluding public schools, to be relatively small. Employment in local public education is expected to edge downward between 2001 and 2008 due to constrained budgets and likely decreasing public school enrollment in the county.

**Construction and mining** will drop by 1,500 jobs between 2001 and 2008. Employment in the construction industry division will likely not return to its all-time high peak in 2001, when work was underway on such major public projects as Bay Area Rapid Transit connections to South San Francisco, San Bruno, the airport and Millbrae, as well as the San Mateo-Hayward Bridge widening and retrofitting.

**Wholesale trade** is projected to lose 1,200 jobs between 2001 and 2008, in line with its long-term trend. Wholesalers handling nondurable and durable goods should experience employment declines.

**Transportation and public utilities** will register a loss of 900 jobs between 2001 and 2008. It is projected that air transportation employment will fall by 1,500 jobs over that period as bankruptcy and financial difficulties affect the local operations of key airlines. Job increases in local transportation and in communications and public utilities will partly offset the expected cutbacks in air transportation.

**Table 1: Employment by Major Industry<sup>1</sup>**  
**2001 – 2008**  
**San Mateo County**

Industry	2001 <sup>2</sup>	Percent of Total	2008	Percent of Total
<b>Total Nonfarm</b>	<b>372,500</b>	<b>100.0%</b>	<b>402,800</b>	<b>100.0%</b>
<b>Mining and Construction</b>	<b>20,500</b>	<b>5.5%</b>	<b>19,000</b>	<b>4.7%</b>
<b>Manufacturing</b>	<b>35,400</b>	<b>9.5%</b>	<b>37,300</b>	<b>9.3%</b>
<b>Transportation and Public Utilities</b>	<b>41,000</b>	<b>11.0%</b>	<b>40,100</b>	<b>10.0%</b>
<b>Trade</b>	<b>78,900</b>	<b>21.2%</b>	<b>83,900</b>	<b>20.8%</b>
<b>Finance, Insurance, and Real Estate</b>	<b>22,800</b>	<b>6.1%</b>	<b>23,100</b>	<b>5.7%</b>
<b>Services</b>	<b>141,000</b>	<b>37.9%</b>	<b>166,400</b>	<b>41.3%</b>
<b>Government</b>	<b>32,900</b>	<b>8.8%</b>	<b>33,000</b>	<b>8.2%</b>

<sup>1</sup>Employment and projections contained in these tables are considered estimates (see introduction for a full explanation of data limitations). Employment is reported by place of work and excludes self-employed persons, unpaid family workers, domestics, volunteers, and those involved in labor-management trade disputes. These data are based on 1987 Standard Industrial Classifications. Annual average industry detail may not add up to totals due to independent rounding. Government data include all civilian government employees regardless of the activities in which they are engaged.

<sup>2</sup>March 2001 benchmark.

**Table 2: Industry Employment Projections<sup>1</sup>**  
**2001 – 2008**  
**San Mateo County**

Industry	SIC	Annual Average Employment		Employment Change	
		2001 <sup>2</sup>	2008	Number	Percent
<b>TOTAL NONFARM</b>	<b>074, 075, 078, 10-99 except 88</b>	<b>372,500</b>	<b>402,800</b>	<b>30,300</b>	<b>8.1</b>
<b>GOODS PRODUCING</b>	<b>10-39</b>	<b>55,900</b>	<b>56,300</b>	<b>400</b>	<b>0.7</b>
<b>MINING &amp; CONSTRUCTION</b>	<b>10-17</b>	<b>20,500</b>	<b>19,000</b>	<b>-1,500</b>	<b>-7.3</b>
<b>MANUFACTURING</b>	<b>20-39</b>	<b>35,400</b>	<b>37,300</b>	<b>1,900</b>	<b>5.4</b>
Durable Goods	24,25,32-39	21,800	22,600	800	3.7
Fabricated Metal Products	34	1,800	1,600	-200	-11.1
Industrial Machinery	35	7,200	7,700	500	6.9
Electronic Equipment	36	3,700	3,500	-200	-5.4
Instruments & Related Products	38	4,600	5,600	1,000	21.7
Other Durable Goods		4,500	4,200	-300	-6.7
Nondurable Goods	20-23,26-31	13,700	14,700	1,000	7.3
Food & Kindred Products	20	2,800	2,600	-200	-7.1
Apparel & Other Textile Products	23	200	200	0	0.0
Paper, Printing & Publishing	26,27	5,100	4,500	-600	-11.8
Chemicals, Petroleum & Coal	28,29	4,900	6,900	2,000	40.8
Other Nondurable Goods		600	500	-100	-16.7
<b>SERVICE PRODUCING</b>	<b>074, 075, 078, 40-99 except 88</b>	<b>316,700</b>	<b>346,500</b>	<b>29,800</b>	<b>9.4</b>
<b>TRANSPORTATION &amp; PUBLIC UTILITIES</b>	<b>40-42,44-49</b>	<b>41,000</b>	<b>40,100</b>	<b>-900</b>	<b>-2.2</b>
Transportation	40-42,44-47	35,200	34,100	-1,100	-3.1
Local & Interurban Pass. Trans.	41	1,200	1,600	400	33.3
Trucking & Warehousing	42	3,400	3,400	0	0.0
Water Transportation	44	100	100	0	0.0
Air Transportation	45	25,900	24,400	-1,500	-5.8
Other Transportation		4,600	4,600	0	0.0
Communications & Public Utilities	48,49	5,800	6,000	200	3.4
<b>TRADE</b>	<b>50-59</b>	<b>78,900</b>	<b>83,900</b>	<b>5,000</b>	<b>6.3</b>
Wholesale Trade	50,51	19,000	17,800	-1,200	-6.3
Wholesale-Durable Goods	50	11,100	10,900	-200	-1.8
Wholesale-Nondurable Goods	51	7,900	6,900	-1,000	-12.7
Retail Trade	52-59	59,900	66,100	6,200	10.4
General Merchandise	53	5,000	5,000	0	0.0
Food Stores	54	7,300	8,400	1,100	15.1
Automotive Dealers & Service	55	5,500	5,700	200	3.6
Apparel & Accessory Stores	56	4,700	4,700	0	0.0
Eating & Drinking Places	58	20,700	22,000	1,300	6.3
Other Retail Trade		16,700	20,300	3,600	21.6

**Table 2: Industry Employment Projections<sup>1</sup>**  
**2001 – 2008**  
**San Mateo County**

Industry	SIC	Annual Average Employment		Employment Change	
		2001 <sup>2</sup>	2008	Number	Percent
<b>FINANCE, INSURANCE &amp; REAL ESTATE</b>	<b>60-65,67</b>	<b>22,800</b>	<b>23,100</b>	<b>300</b>	<b>1.3</b>
Finance	60-62,67	12,600	12,900	300	2.4
Other Finance, Insurance & Real Estate		10,200	10,200	0	0.0
<b>SERVICES</b>	<b>074, 075, 078, 70-89 except 88</b>	<b>141,000</b>	<b>166,400</b>	<b>25,400</b>	<b>18.0</b>
Hotels & Other Lodging Places	70	5,100	6,000	900	17.6
Business Services	73	61,500	74,800	13,300	21.6
Amusement, Including Movies	78,79	6,400	6,900	500	7.8
Health Services	80	19,800	21,800	2,000	10.1
Private Educational Services	82	3,800	4,400	600	15.8
Engineering & Management	87	18,300	22,700	4,400	24.0
Other Services		26,000	29,800	3,800	14.6
<b>GOVERNMENT</b>		<b>32,900</b>	<b>33,000</b>	<b>100</b>	<b>0.3</b>
Federal Government		4,500	4,500	0	0.0
State & Local Government		28,400	28,500	100	0.4
State Government		800	700	-100	-12.5
Local Government		27,600	27,800	200	0.7
Local Education		14,800	14,600	-200	-1.4
Local Non-Education		12,800	13,200	400	3.1

<sup>1</sup>Employment and projections contained in these tables are considered estimates (see introduction for a full explanation of data limitations). Employment is reported by place of work and excludes self-employed persons, unpaid family workers, domestics, volunteers, and those involved in labor-management trade disputes. These data are based on 1987 Standard Industrial Classifications. Annual average industry detail may not add up to totals due to independent rounding. Government data include all civilian government employees regardless of the activities in which they are engaged.

<sup>2</sup>March 2001 benchmark.

# Occupational Trends and Outlook

Job growth or decline is influenced by the overall level of economic activity in a given area; that is, when economic activity refers to the overall economic growth or decline of industries and/or changes in occupation distributions within individual industries. Each area's economic climate influences the growth or decline of occupations that account for a large number of jobs within that area. In contrast, occupations with a small number of workers grow or decline as a result of the growth or decline of their specific industries.

This section provides a discussion of major trends for occupation categories shown in **Table 6: Occupational Employment Projections** (beginning on page D-18). Projected changes in the level of employment in each occupation are an estimate of new job openings expected over a seven-year period. Separations, an estimate of the number of people leaving the workforce or an occupation, accounts for additional job openings. These estimates do not include job openings that are a result of people who change jobs but stay in the same occupation.

## San Mateo County

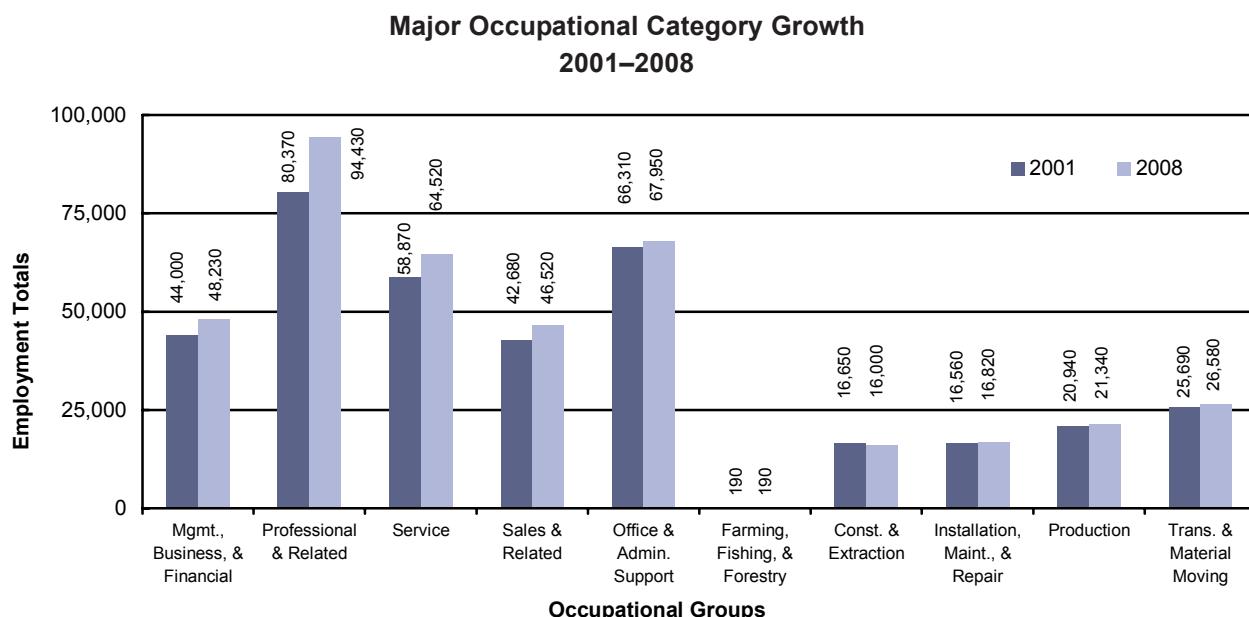
In 2001, San Mateo County had a total of 372,500 workers employed in all industries. Employment projections call for that number to reach 402,800 by 2008. This represents an annual growth rate of 1.2 percent, about half the 2.2 percent growth rate projected for California as a whole.

However, separations will add another 63,410 job openings.

*Professional and related occupations* was San Mateo County's largest occupational group in 2001. Professional and related occupations employed 80,370 persons in 2001 and is projected to add the most new jobs (14,060) to reach 94,430 jobs by 2008, a 17.5 percent growth rate. *Office and administrative support occupations* was the second-largest occupational group, with employment of 66,310 in 2001. This group is expected to grow to 67,950 by 2008, 2.5 percent growth above the 2001 level. The third-largest group was *service occupations* with 2001 employment of 58,870 and expected growth of 9.6 percent, or 5,650 jobs, to a 2008 total of 64,520.

*Professional and related occupations* is projected to be the fastest growing occupational group, with a growth rate of 17.5 percent, followed by a growth rate of 9.6 percent for *management, business, and financial occupations* and *service occupations*.

In San Mateo County, the occupation with the greatest growth (see **Table 4: Occupations with the Greatest Job Growth**) is *computer software engineers (applications)*, projected to grow by 2,110 jobs during the seven-year projection period. These jobs are found mostly in the industry categories of computer and data processing services;



# Occupational Trends and Outlook

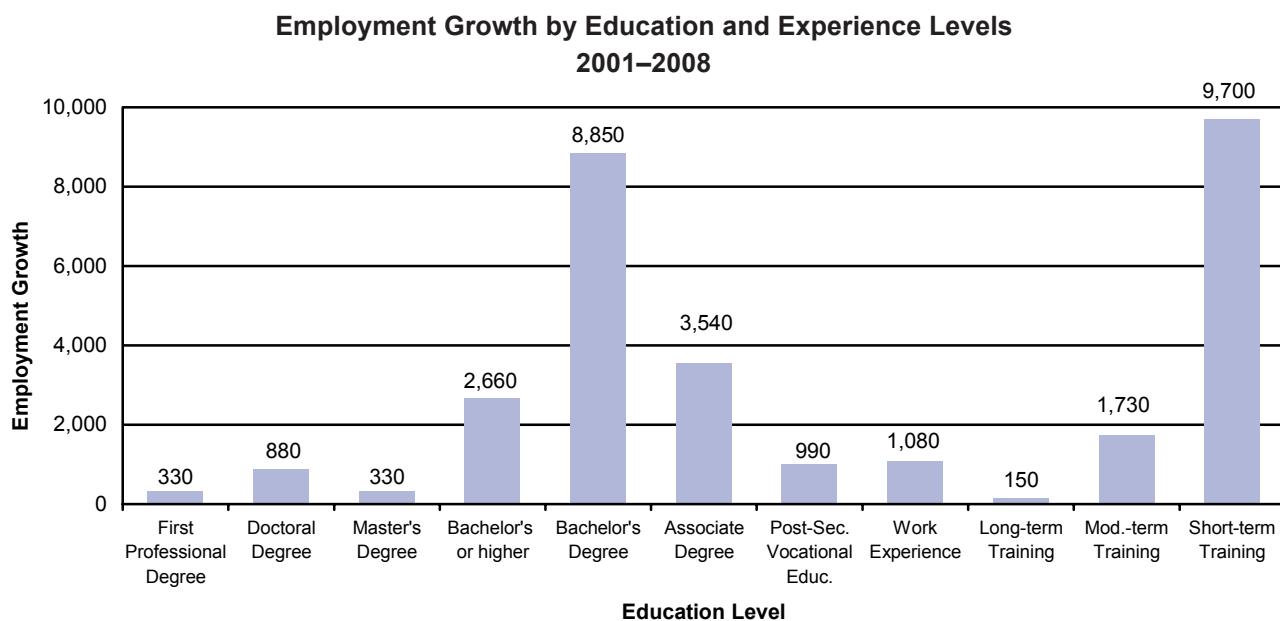
functions closely related to banking; computer and office equipment; and research and testing services (see **Table 2: Industry Employment Projections**). *Computer support specialists* follow with growth of 1,760 jobs, primarily in computer and data processing services; functions closely related to banking; personnel supply services; and professional and commercial equipment. *Retail salespersons* is the third-greatest growth occupation, with an estimated growth of 1,480 jobs. These jobs are mostly employed in department stores; family clothing stores; miscellaneous shopping goods stores; lumber and other building materials; and new and used car dealerships. *Cashiers* will grow by 1,350 jobs, employed in grocery stores; drug stores and proprietary stores; miscellaneous shopping goods stores; and gasoline service stations. *Computer software engineers (systems software)* will add 850 jobs in computer and data processing services; radio, television, and computer stores; computer and office equipment; and commercial banks.

The fastest growing occupation during the seven-year projection period in San Mateo County will be *chemists*, with a growth rate of 53.8 percent (see **Table 5: Occupations with the Fastest Job Growth**), primarily employed in research and testing services; drugs; non-ferrous rolling and drawing; and the federal government. The second-fastest growing occupation is *biochemists and biophysicists*, gaining 53.7 percent, employed largely in

research and testing services; drugs; industrial organic chemicals; and medical and dental laboratories. *Computer support specialists* is projected to increase 46.8 percent in employment by 2008 employed mostly in computer and data processing services; functions closely related to banking; personnel supply services; and professional and commercial equipment. *Chemical engineers* will increase 45 percent, largely employed in drugs; research and testing services; construction and related machinery; and refrigeration and service machinery. *Medical scientists (except epidemiologists)* will increase 43.9 percent by 2008, with employment in research and testing services; drug manufacturing; and hospitals.

The greatest number of new jobs in San Mateo County, 9,700 or 32.0 percent, will require **short-term on-the-job training**. The next greatest number of new jobs, 29.2 percent or 8,850 jobs, will require the employee to have a **bachelor's degree**, while another 3,540 jobs, or 11.7 percent, will require an **associate degree**. Some 8.8 percent, or 2,660, of the new jobs will require the employee to have a **bachelor's degree or higher**.

The chart below displays the number of new jobs by education and experience levels. For more detailed descriptions of training levels, refer to the definitions on the following page.



# Training Level Definitions

Occupational training and education classifications were developed by the Bureau of Labor Statistics to improve on prior classification systems that did not distinguish between occupations with comparable educational requirements. For example, neither carpenters nor laborers require formal education beyond high school, but the complexity of the work and the training time required results in carpenters being placed in the long-term on-the-job training category and laborers placed in the short-term on-the-job training category. Of course there is more than one way to qualify for a job. In this classification system, the education and training required reflects the manner in which most workers become proficient in that occupation and the preferences of most employers.

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## **First professional degree (1)**

Occupations that require at least two years of full-time academic study beyond a bachelor's degree (for example, law, medicine, dentistry and clergy).

## **Doctoral degree (2)**

Occupations that require at least three years of full-time academic study beyond a bachelor's degree, culminating in a doctoral degree.

## **Master's degree (3)**

Occupations that require the completion of a master's degree program, which is usually one to two years beyond a bachelor's degree.

## **Bachelor's or higher, some work experience (4)**

Occupations that generally require work experience in an occupation requiring a bachelor's or higher degree. Most occupations in this category are managerial occupations that require work experience in a related non-managerial occupation.

## **Bachelor's degree (5)**

Occupations that require the completion of at least 4, but not more than 5 years, of full-time academic study beyond high school resulting in a Bachelor's degree.

## **Associate degree (6)**

Occupations that require the completion of at least 2 years of full-time academic study beyond high school.

## **Post-secondary vocational education (7)**

Occupations that require completion of vocational school training.

## **Work experience (8)**

Occupations that require skills obtained through work experience in a related occupation.

## **Long-term on-the-job training (9)**

Occupations that require more than 12 months of on-the-job training or combined work experience and formal classroom instruction for workers to develop the skills needed for average job performance.

## **Moderate-term on-the-job training (10)**

Occupations in which workers can develop average job performance after 1 to 12 months of combined on-the-job experience and informal training.

## **Short-term on-the-job training (11)**

Occupations in which workers can develop skills needed after a short demonstration or up to one month of on-the-job experience and instruction.

**Table 3: Employment by Occupation Group**  
**2001 – 2008**  
*San Mateo County*

Occupational Group	2001 <sup>1</sup>	Percent of Total	2008	Percent of Total	Absolute Change	Percent Change
<b>Total, All Occupations</b>	<b>372,500</b>	<b>100.0%</b>	<b>402,800</b>	<b>100.0%</b>	<b>30,300</b>	<b>8.1%</b>
Management, Business, and Financial	44,000	11.8%	48,230	12.0%	4,230	9.6%
Professional and Related	80,370	21.6%	94,430	23.4%	14,060	17.5%
Service	58,870	15.8%	64,520	16.0%	5,650	9.6%
Sales and Related	42,680	11.5%	46,520	11.5%	3,840	9.0%
Office and Administrative Support	66,310	17.8%	67,950	16.9%	1,640	2.5%
Farming, Fishing, and Forestry	190	0.1%	190	0.0%	0	0.0%
Construction and Extraction	16,650	4.5%	16,000	4.0%	-650	-3.9%
Installation, Maintenance, and Repair	16,560	4.4%	16,820	4.2%	260	1.6%
Production	20,940	5.6%	21,340	5.3%	400	1.9%
Transportation and Material Moving	25,690	6.9%	26,580	6.6%	890	3.5%

<sup>1</sup>Total is based on the March 2001 Benchmark.

**Table 4: Occupations with the Greatest Job Growth<sup>1</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		BLS Training Level	Education/Experience
		2001 <sup>2</sup>	2008	Number	Percent		
15-1031	Computer Software Engineers, Applications	5,110	7,220	2,110	41.3	5	Bachelor's Degree
15-1041	Computer Support Specialists	3,760	5,520	1,760	46.8	6	Associate Degree
41-2031	Retail Salespersons	12,060	13,540	1,480	12.3	11	Short-Term On-The-Job-Training
41-2011	Cashiers	8,670	10,020	1,350	15.6	11	Short-Term On-The-Job-Training
15-1032	Computer Software Engineers, Systems Software	2,080	2,930	850	40.9	5	Bachelor's Degree
43-4051	Customer Service Representatives	6,900	7,730	830	12.0	10	Moderate-Term On-The-Job-Training
37-2011	Janitors & Clean, Ex Maids & Housekeep Cleaners	5,590	6,340	750	13.4	11	Short-Term On-The-Job-Training
15-1071	Network & Computer Systems Administrators	1,700	2,420	720	42.4	5	Bachelor's Degree
33-9032	Security Guards	3,360	4,070	710	21.1	11	Short-Term On-The-Job-Training
15-1051	Computer Systems Analysts	2,420	3,060	640	26.4	5	Bachelor's Degree
11-1021	General & Operations Managers	7,530	8,090	560	7.4	4	Bachelor's or Higher and Some Work Exp.
37-3011	Landscaping & Groundskeeping Workers	2,250	2,760	510	22.7	11	Short-Term On-The-Job-Training
35-3031	Waiters & Waitresses	5,310	5,810	500	9.4	11	Short-Term On-The-Job-Training
15-1081	Network Systems & Data Communications Analysts	1,390	1,850	460	33.1	5	Bachelor's Degree
11-3021	Computer & Information Systems Managers	2,160	2,610	450	20.8	4	Bachelor's or Higher and Some Work Exp.
43-9061	Office Clerks, General	7,560	8,010	450	6.0	11	Short-Term On-The-Job-Training
29-1111	Registered Nurses	3,670	4,100	430	11.7	6	Associate Degree
19-2031	Chemists	780	1,200	420	53.8	5	Bachelor's Degree
37-2012	Maids & Housekeeping Cleaners	2,170	2,590	420	19.4	11	Short-Term On-The-Job-Training
41-1011	First-Line Sups/Mgrs of Retail Sales Workers	3,150	3,560	410	13.0	8	Work Experience
43-6011	Executive Secretaries & Administrative Assistants	6,310	6,710	400	6.3	10	Moderate-Term On-The-Job-Training
35-3021	Comb Food Prep & Serving Wrkrs, Incl Fast Food	3,640	4,000	360	9.9	11	Short-Term On-The-Job-Training
11-2022	Sales Managers	1,540	1,860	320	20.8	4	Bachelor's or Higher and Some Work Exp.
15-1061	Database Administrators	1,060	1,370	310	29.2	5	Bachelor's Degree
13-1111	Management Analysts	1,700	2,000	300	17.6	4	Bachelor's or Higher and Some Work Exp.
43-4171	Receptionists & Information Clerks	2,570	2,860	290	11.3	11	Short-Term On-The-Job-Training
13-2011	Accountants & Auditors	2,800	3,050	250	8.9	5	Bachelor's Degree
19-1042	Medical Scientists, Except Epidemiologists	570	820	250	43.9	2	Doctoral Degree
19-4021	Biological Technicians	600	840	240	40.0	6	Associate Degree
19-1021	Biochemists & Biophysicists	410	630	220	53.7	2	Doctoral Degree

**Table 4: Occupations with the Greatest Job Growth<sup>1</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		BLS Training Level	Education/Experience
		2001 <sup>2</sup>	2008	Number	Percent		
31-9091	Dental Assistants	1,020	1,240	220	21.6	10	Moderate-Term On-The-Job-Training
41-2021	Counter & Rental Clerks	1,300	1,520	220	16.9	11	Short-Term On-The-Job-Training
53-7062	Laborers & Freight, Stock, & Material Movers, Hand	5,690	5,910	220	3.9	11	Short-Term On-The-Job-Training
11-2021	Marketing Managers	1,300	1,510	210	16.2	4	Bachelor's or Higher and Some Work Exp.
11-3031	Financial Managers	2,450	2,660	210	8.6	4	Bachelor's or Higher and Some Work Exp.
33-3051	Police & Sheriff's Patrol Officers	1,280	1,490	210	16.4	9	Long-Term On-The-Job-Training
43-5061	Production, Planning, & Expediting Clerks	1,300	1,510	210	16.2	11	Short-Term On-The-Job-Training
43-5081	Stock Clerks & Order Fillers	4,200	4,410	210	5.0	11	Short-Term On-The-Job-Training
35-2014	Cooks, Restaurant	1,790	1,990	200	11.2	9	Long-Term On-The-Job-Training
53-7061	Cleaners of Vehicles & Equipment	2,150	2,350	200	9.3	11	Short-Term On-The-Job-Training
23-1011	Lawyers	1,360	1,550	190	14.0	1	First Professional Degree
25-9041	Teacher Assistants	2,620	2,810	190	7.3	11	Short-Term On-The-Job-Training
35-2021	Food Preparation Workers	2,740	2,920	180	6.6	11	Short-Term On-The-Job-Training
53-7064	Packers & Packagers, Hand	2,370	2,550	180	7.6	11	Short-Term On-The-Job-Training
31-1012	Nursing Aides, Orderlies, & Attendants	1,540	1,710	170	11.0	11	Short-Term On-The-Job-Training
31-9092	Medical Assistants	860	1,030	170	19.8	10	Moderate-Term On-The-Job-Training
53-3041	Taxi Drivers & Chauffeurs	810	980	170	21.0	11	Short-Term On-The-Job-Training
11-1011	Chief Executives	1,740	1,900	160	9.2	4	Bachelor's or Higher and Some Work Exp.
39-9011	Child Care Workers	670	830	160	23.9	11	Short-Term On-The-Job-Training
39-9031	Fitness Trainers & Aerobics Instructors	660	810	150	22.7	7	Post-Secondary Vocational Education
<b>TOTAL OF THESE OCCUPATIONS</b>		<b>146,670</b>	<b>169,250</b>	<b>22,580</b>	<b>15.4</b>		

<sup>1</sup>Excludes All Other categories.

<sup>2</sup>March 2001 Benchmark.

**Table 5: Occupations with the Fastest Job Growth<sup>1</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		BLS Training Level	Education/Experience
		2001 <sup>2</sup>	2008	Number	Percent		
19-2031	Chemists	780	1,200	420	53.8	5	Bachelor's Degree
19-1021	Biochemists & Biophysicists	410	630	220	53.7	2	Doctoral Degree
15-1041	Computer Support Specialists	3,760	5,520	1,760	46.8	6	Associate Degree
17-2041	Chemical Engineers	200	290	90	45.0	5	Bachelor's Degree
19-1042	Medical Scientists, Except Epidemiologists	570	820	250	43.9	2	Doctoral Degree
15-1071	Network & Computer Systems Administrators	1,700	2,420	720	42.4	5	Bachelor's Degree
15-1031	Computer Software Engineers, Applications	5,110	7,220	2,110	41.3	5	Bachelor's Degree
15-1032	Computer Software Engineers, Systems Software	2,080	2,930	850	40.9	5	Bachelor's Degree
19-4021	Biological Technicians	600	840	240	40.0	6	Associate Degree
19-1022	Microbiologists	230	320	90	39.1	2	Doctoral Degree
29-2052	Pharmacy Technicians	270	360	90	33.3	10	Moderate-Term On-The-Job-Training
15-1081	Network Systems & Data Communications Analysts	1,390	1,850	460	33.1	5	Bachelor's Degree
21-1093	Social & Human Service Assistants	280	370	90	32.1	10	Moderate-Term On-The-Job-Training
19-4031	Chemical Technicians	380	500	120	31.6	6	Associate Degree
29-2071	Medical Records & Health Information Technicians	350	460	110	31.4	6	Associate Degree
11-9121	Natural Sciences Managers	230	300	70	30.4	4	Bachelor's or Higher and Some Work Exp.
43-4111	Interviewers, Except Eligibility & Loan	430	560	130	30.2	11	Short-Term On-The-Job-Training
39-9021	Personal & Home Care Aides	370	480	110	29.7	11	Short-Term On-The-Job-Training
15-1061	Database Administrators	1,060	1,370	310	29.2	5	Bachelor's Degree
17-3027	Mechanical Engineering Technicians	280	360	80	28.6	6	Associate Degree
15-1051	Computer Systems Analysts	2,420	3,060	640	26.4	5	Bachelor's Degree
19-2012	Physicists	230	290	60	26.1	2	Doctoral Degree
39-9011	Child Care Workers	670	830	160	23.9	11	Short-Term On-The-Job-Training
15-1011	Computer & Information Scientists, Research	210	260	50	23.8	2	Doctoral Degree
37-3011	Landscaping & Groundskeeping Workers	2,250	2,760	510	22.7	11	Short-Term On-The-Job-Training
39-9031	Fitness Trainers & Aerobics Instructors	660	810	150	22.7	7	Post-Secondary Vocational Education
35-3041	Food Servers, Nonrestaurant	360	440	80	22.2	11	Short-Term On-The-Job-Training
11-2031	Public Relations Managers	230	280	50	21.7	4	Bachelor's or Higher and Some Work Exp.
31-9091	Dental Assistants	1,020	1,240	220	21.6	10	Moderate-Term On-The-Job-Training
43-4081	Hotel, Motel, & Resort Desk Clerks	420	510	90	21.4	11	Short-Term On-The-Job-Training

**Table 5: Occupations with the Fastest Job Growth<sup>1</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		BLS Training Level	Education/Experience
		2001 <sup>2</sup>	2008	Number	Percent		
33-9032	Security Guards	3,360	4,070	710	21.1	11	Short-Term On-The-Job-Training
53-3041	Taxi Drivers & Chauffeurs	810	980	170	21.0	11	Short-Term On-The-Job-Training
11-3021	Computer & Information Systems Managers	2,160	2,610	450	20.8	4	Bachelor's or Higher and Some Work Exp.
11-2022	Sales Managers	1,540	1,860	320	20.8	4	Bachelor's or Higher and Some Work Exp.
29-2021	Dental Hygienists	690	830	140	20.3	6	Associate Degree
31-9092	Medical Assistants	860	1,030	170	19.8	10	Moderate-Term On-The-Job-Training
31-1011	Home Health Aides	610	730	120	19.7	11	Short-Term On-The-Job-Training
37-2012	Maids & Housekeeping Cleaners	2,170	2,590	420	19.4	11	Short-Term On-The-Job-Training
29-1051	Pharmacists	530	630	100	18.9	1	First Professional Degree
27-2042	Musicians & Singers	270	320	50	18.5	9	Long-Term On-The-Job-Training
13-1111	Management Analysts	1,700	2,000	300	17.6	4	Bachelor's or Higher and Some Work Exp.
41-9011	Demonstrators & Product Promoters	630	740	110	17.5	10	Moderate-Term On-The-Job-Training
41-2021	Counter & Rental Clerks	1,300	1,520	220	16.9	11	Short-Term On-The-Job-Training
11-2011	Advertising & Promotions Managers	480	560	80	16.7	4	Bachelor's or Higher and Some Work Exp.
11-9111	Medical & Health Services Managers	300	350	50	16.7	4	Bachelor's or Higher and Some Work Exp.
21-1023	Mental Health & Substance Abuse Social Workers	300	350	50	16.7	3	Master's Degree
27-4021	Photographers	300	350	50	16.7	9	Long-Term On-The-Job-Training
29-2041	Emergency Medical Technicians & Paramedics	300	350	50	16.7	7	Post-Secondary Vocational Education
33-3051	Police & Sheriff's Patrol Officers	1,280	1,490	210	16.4	9	Long-Term On-The-Job-Training
11-2021	Marketing Managers	1,300	1,510	210	16.2	4	Bachelor's or Higher and Some Work Exp.
<b>TOTAL OF THESE OCCUPATIONS</b>		<b>49,840</b>	<b>64,150</b>	<b>14,310</b>	<b>28.7</b>		

<sup>1</sup>Excludes All Other categories and occupations of less than 200 in the year 2001.

<sup>2</sup>March 2001 Benchmark.

**Table 6: Occupational Employment Projections<sup>1,2</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		Openings Due to Separations	BLS Training Level	Education/Experience
		2001 <sup>3</sup>	2008	Number	Percent			
00-0000	Total, All Occupations	372,500	402,800	30,300	8.1	63,410		
11-13-0000	Management, Business, & Financial Occupations	44,000	48,230	4,230	9.6	5,760		
11-0000	Management Occupations	26,640	29,210	2,570	9.6	3,330		
11-1011	Chief Executives	1,740	1,900	160	9.2	400	4	Bachelor's or Higher and Some Work Exp.
11-1021	General & Operations Managers	7,530	8,090	560	7.4	900	4	Bachelor's or Higher and Some Work Exp.
11-1031	Legislators	70	70	0	0.0	20	4	Bachelor's or Higher and Some Work Exp.
11-2011	Advertising & Promotions Managers	480	560	80	16.7	50	4	Bachelor's or Higher and Some Work Exp.
11-2021	Marketing Managers	1,300	1,510	210	16.2	140	4	Bachelor's or Higher and Some Work Exp.
11-2022	Sales Managers	1,540	1,860	320	20.8	170	4	Bachelor's or Higher and Some Work Exp.
11-2031	Public Relations Managers	230	280	50	21.7	30	4	Bachelor's or Higher and Some Work Exp.
11-3011	Administrative Services Managers	1,080	1,190	110	10.2	130	4	Bachelor's or Higher and Some Work Exp.
11-3021	Computer & Information Systems Managers	2,160	2,610	450	20.8	280	4	Bachelor's or Higher and Some Work Exp.
11-3031	Financial Managers	2,450	2,660	210	8.6	270	4	Bachelor's or Higher and Some Work Exp.
11-3040	Human Resources Managers	690	750	60	8.7	*		
11-3051	Industrial Production Managers	380	390	10	2.6	40	5	Bachelor's Degree
11-3061	Purchasing Managers	310	310	0	0.0	70	4	Bachelor's or Higher and Some Work Exp.
11-3071	Transportation, Storage, & Distribution Managers	420	440	20	4.8	50	8	Work Experience
11-9021	Construction Managers	630	610	-20	-3.2	70	5	Bachelor's Degree
11-9031	Educ Admins, Preschool & Child Care Center/Program	120	150	30	25.0	20	4	Bachelor's or Higher and Some Work Exp.
11-9032	Educ Admins, Elementary & Secondary School	420	420	0	0.0	80	4	Bachelor's or Higher and Some Work Exp.
11-9033	Education Administrators, Postsecondary	50	50	0	0.0	10	4	Bachelor's or Higher and Some Work Exp.
11-9041	Engineering Managers	990	1,030	40	4.0	110	4	Bachelor's or Higher and Some Work Exp.
11-9051	Food Service Managers	470	500	30	6.4	40	8	Work Experience
11-9081	Lodging Managers	70	80	10	14.3	10	8	Work Experience
11-9111	Medical & Health Services Managers	300	350	50	16.7	40	4	Bachelor's or Higher and Some Work Exp.
11-9121	Natural Sciences Managers	230	300	70	30.4	30	4	Bachelor's or Higher and Some Work Exp.
11-9141	Property, Real Estate, & Community Assn Mgrs	690	710	20	2.9	80	5	Bachelor's Degree
11-9151	Social & Community Service Managers	200	220	20	10.0	30	5	Bachelor's Degree
11-9199	Managers, All Other	2,090	2,170	80	3.8	260	8	Work Experience

**Table 6: Occupational Employment Projections<sup>1,2</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		Openings Due to Separations	BLS Training Level	Education/Experience
		2001 <sup>3</sup>	2008	Number	Percent			
<b>13-0000</b>	<b>Business &amp; Financial Operations Occupations</b>	<b>17,360</b>	<b>19,020</b>	<b>1,660</b>	<b>9.6</b>	<b>2,430</b>		
13-1021	Purchasing Agents & Buyers, Farm Products	60	60	0	0.0	10	8	Work Experience
13-1022	Wholesale & Retail Buyers, Except Farm Products	650	630	-20	-3.1	140	5	Bachelor's Degree
13-1023	Purch Agents, Ex Wholesale, Retail, & Farm Products	730	810	80	11.0	110	5	Bachelor's Degree
13-1031	Claims Adjusters, Examiners, & Investigators	400	410	10	2.5	30	9	Long-Term On-The-Job-Training
13-1041	Comp Officers, Ex Ag, Const, Hlth & Safety, & Trans	520	540	20	3.8	90	9	Long-Term On-The-Job-Training
13-1051	Cost Estimators	940	930	-10	-1.1	140	5	Bachelor's Degree
13-1071	Employment, Recruitment, & Placement Specialists	1,020	1,140	120	11.8	140	5	Bachelor's Degree
13-1072	Compensation, Benefits, & Job Analysis Specialists	210	240	30	14.3	30	5	Bachelor's Degree
13-1073	Training & Development Specialists	540	600	60	11.1	80	5	Bachelor's Degree
13-1111	Management Analysts	1,700	2,000	300	17.6	110	4	Bachelor's or Higher and Some Work Exp.
13-1121	Meeting & Convention Planners	190	230	40	21.1	30	5	Bachelor's Degree
13-1199	Business Operations Specialists, All Other	4,290	4,750	460	10.7	790	5	Bachelor's Degree
13-2011	Accountants & Auditors	2,800	3,050	250	8.9	300	5	Bachelor's Degree
13-2021	Appraisers & Assessors of Real Estate	150	160	10	6.7	30	7	Post-Secondary Vocational Education
13-2031	Budget Analysts	210	230	20	9.5	30	5	Bachelor's Degree
13-2041	Credit Analysts	160	170	10	6.3	20	5	Bachelor's Degree
13-2051	Financial Analysts	860	960	100	11.6	90	5	Bachelor's Degree
13-2052	Personal Financial Advisors	250	290	40	16.0	20	5	Bachelor's Degree
13-2053	Insurance Underwriters	150	140	-10	-6.7	20	5	Bachelor's Degree
13-2061	Financial Examiners	110	110	0	0.0	10	5	Bachelor's Degree
13-2071	Loan Counselors	70	80	10	14.3	10	5	Bachelor's Degree
13-2072	Loan Officers	380	390	10	2.6	50	5	Bachelor's Degree
13-2081	Tax Examiners, Collectors, & Revenue Agents	80	90	10	12.5	20	5	Bachelor's Degree
13-2082	Tax Preparers	210	230	20	9.5	30	10	Moderate-Term On-The-Job-Training
13-2099	Financial Specialists, All Other	680	780	100	14.7	100	5	Bachelor's Degree
<b>15-29-0000</b>	<b>Professional &amp; Related Occupations</b>	<b>80,370</b>	<b>94,430</b>	<b>14,060</b>	<b>17.5</b>	<b>10,250</b>		
<b>15-0000</b>	<b>Computer &amp; Mathematical Science Occupations</b>	<b>26,960</b>	<b>34,330</b>	<b>7,370</b>	<b>27.3</b>	<b>2,060</b>		
15-1011	Computer & Information Scientists, Research	210	260	50	23.8	10	2	Doctoral Degree
15-1021	Computer Programmers	7,240	7,240	0	0.0	1,050	5	Bachelor's Degree

**Table 6: Occupational Employment Projections<sup>1,2</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		Openings Due to Separations	BLS Training Level	Education/Experience
		2001 <sup>3</sup>	2008	Number	Percent			
15-1031	Computer Software Engineers, Applications	5,110	7,220	2,110	41.3	280	5	Bachelor's Degree
15-1032	Computer Software Engineers, Systems Software	2,080	2,930	850	40.9	110	5	Bachelor's Degree
15-1041	Computer Support Specialists	3,760	5,520	1,760	46.8	130	6	Associate Degree
15-1051	Computer Systems Analysts	2,420	3,060	640	26.4	160	5	Bachelor's Degree
15-1061	Database Administrators	1,060	1,370	310	29.2	30	5	Bachelor's Degree
15-1071	Network & Computer Systems Administrators	1,700	2,420	720	42.4	60	5	Bachelor's Degree
15-1081	Network Systems & Data Communications Analysts	1,390	1,850	460	33.1	50	5	Bachelor's Degree
15-1099	Computer Specialists, All Other	1,390	1,880	490	35.3	100	7	Post-Secondary Vocational Education
15-2031	Operations Research Analysts	270	280	10	3.7	60	3	Master's Degree
15-2041	Statisticians	270	250	-20	-7.4	20	3	Master's Degree
15-2099	Mathematical Science Occupations, All Other	60	50	-10	-16.7	0	3	Master's Degree
<b>17-0000</b>	<b>Architecture &amp; Engineering Occupations</b>	<b>9,090</b>	<b>9,930</b>	<b>840</b>	<b>9.2</b>	<b>1,280</b>		
17-1011	Architects, Except Landscape & Naval	450	460	10	2.2	20	5	Bachelor's Degree
17-1012	Landscape Architects	90	110	20	22.2	0	5	Bachelor's Degree
17-2011	Aerospace Engineers	250	250	0	0.0	50	5	Bachelor's Degree
17-2031	Biomedical Engineers	70	110	40	57.1	10	5	Bachelor's Degree
17-2041	Chemical Engineers	200	290	90	45.0	30	5	Bachelor's Degree
17-2051	Civil Engineers	550	540	-10	-1.8	60	5	Bachelor's Degree
17-2061	Computer Hardware Engineers	470	540	70	14.9	50	5	Bachelor's Degree
17-2071	Electrical Engineers	770	830	60	7.8	100	5	Bachelor's Degree
17-2072	Electronics Engineers, Except Computer	420	460	40	9.5	60	5	Bachelor's Degree
17-2081	Environmental Engineers	160	200	40	25.0	20	5	Bachelor's Degree
17-2111	Health & Safety Engrs, Ex Mining Safety Engrs & Inspectors	90	100	10	11.1	10	5	Bachelor's Degree
17-2112	Industrial Engineers	770	820	50	6.5	90	5	Bachelor's Degree
17-2131	Materials Engineers	50	50	0	0.0	10	5	Bachelor's Degree
17-2141	Mechanical Drafters	460	520	60	13.0	100	5	Bachelor's Degree
17-2199	Engineers, All Other	1,510	1,610	100	6.6	210	5	Bachelor's Degree
17-3011	Architectural & Civil Drafters	190	200	10	5.3	40	7	Post-Secondary Vocational Education
17-3012	Electrical & Electronics Drafters	170	190	20	11.8	40	7	Post-Secondary Vocational Education
17-3013	Mechanical Drafters	120	140	20	16.7	30	7	Post-Secondary Vocational Education
17-3021	Aerospace Engineering & Operations Technicians	450	400	-50	-11.1	60	6	Associate Degree
17-3022	Civil Engineering Technicians	80	80	0	0.0	10	6	Associate Degree
17-3023	Electrical & Electronic Engineering Technicians	880	930	50	5.7	130	6	Associate Degree
17-3024	Electro-Mechanical Technicians	100	110	10	10.0	10	6	Associate Degree

**Table 6: Occupational Employment Projections<sup>1,2</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		Openings Due to Separations	BLS Training Level	Education/Experience
		2001 <sup>3</sup>	2008	Number	Percent			
17-3026	Industrial Engineering Technicians	130	160	30	23.1	20	6	Associate Degree
17-3027	Mechanical Engineering Technicians	280	360	80	28.6	50	6	Associate Degree
17-3031	Surveying & Mapping Technicians	50	50	0	0.0	10	10	Moderate-Term On-The-Job-Training
17-3099	Drafters, Engineering, & Map Technicians, All Other	330	420	90	27.3	60	6	Associate Degree
<b>19-0000</b>	<b>Life, Physical, &amp; Social Science Occupations</b>	<b>6,900</b>	<b>9,070</b>	<b>2,170</b>	<b>31.4</b>	<b>1,650</b>		
19-1010	Agricultural & Food Scientists	50	50	0	0.0	*		
19-1021	Biochemists & Biophysicists	410	630	220	53.7	130	2	Doctoral Degree
19-1022	Microbiologists	230	320	90	39.1	70	2	Doctoral Degree
19-1023	Zoologists & Wildlife Biologists	70	80	10	14.3	20	2	Doctoral Degree
19-1041	Epidemiologists	50	70	20	40.0	10	2	Doctoral Degree
19-1042	Medical Scientists, Except Epidemiologists	570	820	250	43.9	110	2	Doctoral Degree
19-1099	Life Scientists, All Other	500	630	130	26.0	150	2	Doctoral Degree
19-2012	Physicists	230	290	60	26.1	60	2	Doctoral Degree
19-2031	Chemists	780	1,200	420	53.8	220	5	Bachelor's Degree
19-2032	Materials Scientists	50	70	20	40.0	10	5	Bachelor's Degree
19-2041	Environmental Scientists & Specialists, Incl Health Geoscientists, Except Hydrologists & Geographers	110	110	0	0.0	30	5	Bachelor's Degree
19-2042	Physical Scientists, All Other	110	120	10	9.1	30	5	Bachelor's Degree
19-2099	Economists	300	380	80	26.7	100	5	Bachelor's Degree
19-3011	Market Research Analysts	160	220	60	37.5	30	5	Bachelor's Degree
19-3021	Survey Researchers	840	930	90	10.7	140	5	Bachelor's Degree
19-3022	Clinical, Counseling, & School Psychologists	160	220	60	37.5	30	5	Bachelor's Degree
19-3031	Urban & Regional Planners	280	300	20	7.1	50	3	Master's Degree
19-3051	Social Scientists & Related Workers, All Other	90	90	0	0.0	20	3	Master's Degree
19-3099	Biological Technicians	220	250	30	13.6	40	3	Master's Degree
19-4021	Chemical Technicians	600	840	240	40.0	120	6	Associate Degree
19-4031	Life, Physical, & Social Science Techs, All Other	380	500	120	31.6	70	6	Associate Degree
		710	950	240	33.8	210	6	Associate Degree
<b>21-0000</b>	<b>Community &amp; Social Services Occupations</b>	<b>2,750</b>	<b>3,150</b>	<b>400</b>	<b>14.5</b>	<b>330</b>		
21-1011	Substance Abuse & Behavioral Disorder Counselors	240	270	30	12.5	40	3	Master's Degree
21-1012	Educational, Vocational, & School Counselors	250	280	30	12.0	40	3	Master's Degree
21-1013	Marriage & Family Therapists	80	90	10	12.5	10	3	Master's Degree

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**2001 – 2008**  
**San Mateo County**

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		2001 <sup>3</sup>	2008	Number	Percent			
21-1014	Mental Health Counselors	230	240	10	4.3	30	3	Master's Degree
21-1021	Child, Family, & School Social Workers	460	530	70	15.2	40	5	Bachelor's Degree
21-1022	Medical & Public Health Social Workers	110	120	10	9.1	10	5	Bachelor's Degree
21-1023	Mental Health & Substance Abuse Social Workers	300	350	50	16.7	20	3	Master's Degree
21-1091	Health Educators	70	80	10	14.3	10	3	Master's Degree
21-1092	Probation Officers & Correctional Treatment Specialists	110	120	10	9.1	10	5	Bachelor's Degree
21-1093	Social & Human Service Assistants	280	370	90	32.1	30	10	Moderate-Term On-The-Job-Training
21-2011	Clergy	110	130	20	18.2	20	1	First Professional Degree
21-2021	Directors, Religious Activities & Education	110	130	20	18.2	10	5	Bachelor's Degree
21-9099	Counselors, Social & Religious Workers, All Other	360	400	40	11.1	50	5	Bachelor's Degree
<b>23-0000</b>	<b>Legal Occupations</b>	<b>2,560</b>	<b>2,950</b>	<b>390</b>	<b>15.2</b>	<b>140</b>		
23-1011	Lawyers	1,360	1,550	190	14.0	70	1	First Professional Degree
23-1021	Admin Law Judges, Adjudicators, & Hearing Officers	50	50	0	0.0	10	4	Bachelor's or Higher and Some Work Exp.
23-2011	Paralegals & Legal Assistants	480	550	70	14.6	20	6	Associate Degree
23-2092	Law Clerks	70	70	0	0.0	0	5	Bachelor's Degree
23-2093	Title Examiners, Abstractors, & Searchers	210	200	-10	-4.8	10	10	Moderate-Term On-The-Job-Training
23-9099	Legal & Related Workers, All Other	380	520	140	36.8	30	5	Bachelor's Degree
<b>25-0000</b>	<b>Education, Training, &amp; Library Occupations</b>	<b>15,280</b>	<b>16,140</b>	<b>860</b>	<b>5.6</b>	<b>2,220</b>		
25-1071	Health Specialties Teachers, Postsecondary	70	80	10	14.3	20	2	Doctoral Degree
25-1191	Graduate Teaching Assistants	180	200	20	11.1	40	5	Bachelor's Degree
25-1194	Vocational Education Teachers, Postsecondary	150	170	20	13.3	30	8	Work Experience
25-1199	Postsecondary Teachers, All Other	470	510	40	8.5	70	2	Doctoral Degree
25-2011	Preschool Teachers, Except Special Education	1,420	1,550	130	9.2	130	5	Bachelor's Degree
25-2012	Kindergarten Teachers, Except Special Education	490	490	0	0.0	40	5	Bachelor's Degree
25-2021	Elementary School Teachers, Except Special Ed	3,590	3,650	60	1.7	570	5	Bachelor's Degree
25-2022	Mid School Teachers, Ex Special & Vocational Ed	1,620	1,630	10	0.6	250	5	Bachelor's Degree
25-2031	Secondary School Teachers, Ex Special & Voc Ed	1,230	1,270	40	3.3	260	5	Bachelor's Degree
25-2032	Vocational Education Teachers, Secondary School	380	390	10	2.6	80	5	Bachelor's Degree
25-2041	Special Ed Teachers, Preschool, Kindergarten, & Elementary	480	520	40	8.3	40	5	Bachelor's Degree
25-2042	Special Education Teachers, Middle School	100	110	10	10.0	10	5	Bachelor's Degree
25-2043	Special Education Teachers, Secondary School	100	100	0	0.0	10	5	Bachelor's Degree

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**San Mateo County**

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		2001 <sup>3</sup>	2008	Number	Percent			
25-3011	Adult Literacy, Remedial Ed, & GED Teachers & Instructors	50	60	10	20.0	0	5	Bachelor's Degree
25-3021	Self-Enrichment Education Teachers	760	850	90	11.8	60	8	Work Experience
25-3999	Teachers, Primary, Secondary, & Adult, All Other	670	760	90	13.4	50	5	Bachelor's Degree
25-4021	Librarians	280	300	20	7.1	40	3	Master's Degree
25-4031	Library Technicians	260	280	20	7.7	90	11	Short-Term On-The-Job-Training
25-9031	Instructional Coordinators	150	180	30	20.0	20	3	Master's Degree
25-9041	Teacher Assistants	2,620	2,810	190	7.3	390	11	Short-Term On-The-Job-Training
25-9099	Education, Training, & Library Workers, All Other	170	190	20	11.8	10	5	Bachelor's Degree
27-0000	Arts, Design, Entertainment, Sports, & Media Occupations	5,610	6,190	580	10.3	810		
27-1011	Art Directors	60	60	0	0.0	10	4	Bachelor's or Higher and Some Work Exp.
27-1013	Fine Artists, Incl Painters, Sculptors, & Illustrators	50	50	0	0.0	10	9	Long-Term On-The-Job-Training
27-1014	Multi-Media Artists & Animators	460	510	50	10.9	70	5	Bachelor's Degree
27-1021	Commercial & Industrial Designers	140	150	10	7.1	10	5	Bachelor's Degree
27-1023	Floral Designers	200	220	20	10.0	20	10	Moderate-Term On-The-Job-Training
27-1024	Graphic Designers	510	590	80	15.7	40	5	Bachelor's Degree
27-1025	Interior Designers	130	140	10	7.7	10	5	Bachelor's Degree
27-1026	Merchandise Displayers & Window Trimmers	140	160	20	14.3	10	10	Moderate-Term On-The-Job-Training
27-1099	Art & Design Workers, All Other	160	210	50	31.3	20	5	Bachelor's Degree
27-2011	Actors	60	70	10	16.7	10	9	Long-Term On-The-Job-Training
27-2012	Producers & Directors	110	120	10	9.1	20	4	Bachelor's or Higher and Some Work Exp.
27-2022	Coaches & Scouts	70	80	10	14.3	10	9	Long-Term On-The-Job-Training
27-2031	Dancers	50	60	10	20.0	10	9	Long-Term On-The-Job-Training
27-2041	Music Directors & Composers	60	70	10	16.7	10	4	Bachelor's or Higher and Some Work Exp.
27-2042	Musicians & Singers	270	320	50	18.5	40	9	Long-Term On-The-Job-Training
27-2099	Entertainers & Performers, Sports & Rel Workers	60	70	10	16.7	10	9	Long-Term On-The-Job-Training
27-3010	Announcers	120	120	0	0.0	*		
27-3020	News Analysts, Reporters & Correspondents	80	70	-10	-12.5	*		
27-3031	Public Relations Specialists	690	780	90	13.0	90	5	Bachelor's Degree
27-3041	Editors	490	530	40	8.2	120	5	Bachelor's Degree
27-3042	Technical Writers	440	460	20	4.5	90	5	Bachelor's Degree
27-3043	Writers & Authors	290	330	40	13.8	40	5	Bachelor's Degree
27-3099	Media & Communication Workers, All Other	230	230	0	0.0	30	9	Long-Term On-The-Job-Training
27-4011	Audio & Video Equipment Technicians	100	100	0	0.0	20	9	Long-Term On-The-Job-Training
27-4012	Broadcast Technicians	60	60	0	0.0	10	7	Post-Secondary Vocational Education

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**2001 – 2008**  
**San Mateo County**

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		2001 <sup>3</sup>	2008	Number	Percent			
27-4014	Sound Engineering Technicians	50	50	0	0.0	10	7	Post-Secondary Vocational Education
27-4021	Photographers	300	350	50	16.7	50	9	Long-Term On-The-Job-Training
27-4031	Camera Ops, Television, Video, & Motion Picture	110	120	10	9.1	20	10	Moderate-Term On-The-Job-Training
27-4099	Media & Communication Equipment Workers, All Other	90	90	0	0.0	20	10	Moderate-Term On-The-Job-Training
<b>29-0000</b>	<b>Healthcare Practitioners &amp; Technical Occupations</b>	<b>11,220</b>	<b>12,670</b>	<b>1,450</b>	<b>12.9</b>	<b>1,760</b>		
29-1011	Chiropractors	100	100	0	0.0	10	1	First Professional Degree
29-1020	Dentists	420	440	20	4.8	*		
29-1031	Dietitians & Nutritionists	50	50	0	0.0	10	5	Bachelor's Degree
29-1041	Optometrists	70	70	0	0.0	10	1	First Professional Degree
29-1051	Pharmacists	530	630	100	18.9	120	1	First Professional Degree
29-1062	Family & General Practitioners	150	160	10	6.7	20	1	First Professional Degree
29-1063	Internists, General	290	290	0	0.0	30	1	First Professional Degree
29-1066	Psychiatrists	50	50	0	0.0	10	1	First Professional Degree
29-1067	Surgeons	50	50	0	0.0	10	1	First Professional Degree
29-1071	Physician Assistants	80	100	20	25.0	10	5	Bachelor's Degree
29-1111	Registered Nurses	3,670	4,100	430	11.7	540	6	Associate Degree
29-1121	Audiologists	60	80	20	33.3	10	3	Master's Degree
29-1122	Occupational Therapists	110	120	10	9.1	20	5	Bachelor's Degree
29-1123	Physical Therapists	480	540	60	12.5	90	3	Master's Degree
29-1125	Recreational Therapists	50	60	10	20.0	10	5	Bachelor's Degree
29-1126	Respiratory Therapists	110	130	20	18.2	20	6	Associate Degree
29-1127	Speech-Language Pathologists	200	230	30	15.0	40	3	Master's Degree
29-1131	Veterinarians	100	110	10	10.0	10	1	First Professional Degree
29-1199	Health Diagnosing & Treating Practitioners, All Other	150	150	0	0.0	20	1	First Professional Degree
29-2011	Medical & Clinical Laboratory Technologists	220	240	20	9.1	40	5	Bachelor's Degree
29-2012	Medical & Clinical Laboratory Technicians	230	260	30	13.0	40	6	Associate Degree
29-2021	Dental Hygienists	690	830	140	20.3	80	6	Associate Degree
29-2034	Radiologic Technologists & Technicians	330	370	40	12.1	50	6	Associate Degree
29-2041	Emergency Medical Technicians & Paramedics	300	350	50	16.7	60	7	Post-Secondary Vocational Education
29-2052	Pharmacy Technicians	270	360	90	33.3	60	10	Moderate-Term On-The-Job-Training
29-2055	Surgical Technologists	110	140	30	27.3	20	7	Post-Secondary Vocational Education
29-2056	Veterinary Technologists & Technicians	170	170	0	0.0	30	6	Associate Degree
29-2061	Licensed Practical & Licensed Vocational Nurses	810	870	60	7.4	150	7	Post-Secondary Vocational Education
29-2071	Medical Records & Health Information Technicians	350	460	110	31.4	60	6	Associate Degree

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**San Mateo County**

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		2001 <sup>3</sup>	2008	Number	Percent			
29-2081	Opticians, Dispensing	50	50	0	0.0	10	9	Long-Term On-The-Job-Training
29-2099	Health Technologists & Technicians, All Other	190	220	30	15.8	30	5	Bachelor's Degree
29-9010	Occupational Health & Safety Specialists & Techs	60	70	10	16.7	* 140	6	Associate Degree
29-9199	Health Professionals & Technicians, All Other	710	810	100	14.1			
<b>31-39-0000</b>	<b>Service Occupations</b>	<b>58,870</b>	<b>64,520</b>	<b>5,650</b>	<b>9.6</b>	<b>14,760</b>		
<b>31-0000</b>	<b>Healthcare Support Occupations</b>	<b>5,570</b>	<b>6,460</b>	<b>890</b>	<b>16.0</b>	<b>810</b>		
31-1011	Home Health Aides	610	730	120	19.7	60	11	Short-Term On-The-Job-Training
31-1012	Nursing Aides, Orderlies, & Attendants	1,540	1,710	170	11.0	140	11	Short-Term On-The-Job-Training
31-1013	Psychiatric Aides	110	110	0	0.0	10	11	Short-Term On-The-Job-Training
31-2021	Physical Therapist Assistants	120	150	30	25.0	30	6	Associate Degree
31-2022	Physical Therapist Aides	110	130	20	18.2	20	11	Short-Term On-The-Job-Training
31-9011	Massage Therapists	230	260	30	13.0	40	7	Post-Secondary Vocational Education
31-9091	Dental Assistants	1,020	1,240	220	21.6	140	10	Moderate-Term On-The-Job-Training
31-9092	Medical Assistants	860	1,030	170	19.8	180	10	Moderate-Term On-The-Job-Training
31-9093	Medical Equipment Preparers	80	90	10	12.5	20	11	Short-Term On-The-Job-Training
31-9094	Medical Transcriptionists	130	150	20	15.4	30	7	Post-Secondary Vocational Education
31-9095	Pharmacy Aides	160	200	40	25.0	30	11	Short-Term On-The-Job-Training
31-9096	Veterinary Assistants & Lab Animal Caretakers	180	220	40	22.2	40	11	Short-Term On-The-Job-Training
31-9099	Healthcare Support Workers, All Other	420	440	20	4.8	70	11	Short-Term On-The-Job-Training
<b>33-0000</b>	<b>Protective Service Occupations</b>	<b>7,150</b>	<b>8,170</b>	<b>1,020</b>	<b>14.3</b>	<b>1,550</b>		
33-1012	First-Line Sups/Managers of Police & Detectives	140	150	10	7.1	30	8	Work Experience
33-1021	First-Line Sups/Mgrs of Fire Fighting & Prevention Workers	230	230	0	0.0	50	8	Work Experience
33-1099	First-Line Sups/Mgrs, Protective Serv Wrkrs, All Other	140	150	10	7.1	30	8	Work Experience
33-2011	Fire Fighters	1,100	1,100	0	0.0	200	9	Long-Term On-The-Job-Training
33-3012	Correctional Officers & Jailers	190	200	10	5.3	30	10	Moderate-Term On-The-Job-Training
33-3021	Detectives & Criminal Investigators	90	110	20	22.2	20	8	Work Experience
33-3051	Police & Sheriff's Patrol Officers	1,280	1,490	210	16.4	200	9	Long-Term On-The-Job-Training
33-9021	Private Detectives & Investigators	80	90	10	12.5	20	8	Work Experience

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**San Mateo County**

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		2001 <sup>3</sup>	2008	Number	Percent			
33-9032	Security Guards	3,360	4,070	710	21.1	720	11	Short-Term On-The-Job-Training
33-9091	Crossing Guards	120	120	0	0.0	30	11	Short-Term On-The-Job-Training
33-9099	Protective Service Workers, All Other	420	460	40	9.5	220	11	Short-Term On-The-Job-Training
<b>35-0000</b>	<b>Food Preparation &amp; Serving Related Occupations</b>	<b>24,570</b>	<b>26,190</b>	<b>1,620</b>	<b>6.6</b>	<b>8,350</b>		
35-1011	Chefs & Head Cooks	270	280	10	3.7	60	7	Post-Secondary Vocational Education
35-1012	First-Line Sups/Mgrs of Food Prep & Serving Workers	1,200	1,280	80	6.7	220	8	Work Experience
35-2011	Cooks, Fast Food	960	980	20	2.1	200	11	Short-Term On-The-Job-Training
35-2012	Cooks, Institution & Cafeteria	540	560	20	3.7	110	9	Long-Term On-The-Job-Training
35-2014	Cooks, Restaurant	1,790	1,990	200	11.2	390	9	Long-Term On-The-Job-Training
35-2015	Cooks, Short Order	1,500	1,550	50	3.3	320	11	Short-Term On-The-Job-Training
35-2021	Food Preparation Workers	2,740	2,920	180	6.6	800	11	Short-Term On-The-Job-Training
35-3011	Bartenders	1,180	1,270	90	7.6	340	11	Short-Term On-The-Job-Training
35-3021	Comb Food Prep & Serving Wkrs, Incl Fast Food	3,640	4,000	360	9.9	1,700	11	Short-Term On-The-Job-Training
35-3022	Counter Attends, Cafe, Food Concess., & Coffee Shop	1,630	1,720	90	5.5	990	11	Short-Term On-The-Job-Training
35-3031	Waiters & Waitresses	5,310	5,810	500	9.4	2,220	11	Short-Term On-The-Job-Training
35-3041	Food Servers, Nonrestaurant	360	440	80	22.2	130	11	Short-Term On-The-Job-Training
35-9011	Dining Rm & Cafeteria Attendants & Bartender Helpers	1,250	1,220	-30	-2.4	300	11	Short-Term On-The-Job-Training
35-9021	Dishwashers	1,540	1,490	-50	-3.2	420	11	Short-Term On-The-Job-Training
35-9031	Hosts & Hostess, Restaurant, Lounge, & Coffee Shop	580	610	30	5.2	130	11	Short-Term On-The-Job-Training
35-9099	Food Prep & Serving Related Workers, All Other	80	70	-10	-12.5	20	11	Short-Term On-The-Job-Training
<b>37-0000</b>	<b>Building &amp; Grounds Cleaning &amp; Maintenance Occs</b>	<b>11,520</b>	<b>13,400</b>	<b>1,880</b>	<b>16.3</b>	<b>1,760</b>		
37-1011	First-Line Sups/Mgrs of Housekeep & Janitor Workers	470	520	50	10.6	90	8	Work Experience
37-1012	First-Line Sups/Mgrs of Lndscp, Lwn Serv, & Groundskeepin	330	380	50	15.2	10	8	Work Experience
37-2011	Janitors & Clean, Ex Maids & Housekeep Cleaners	5,590	6,340	750	13.4	750	11	Short-Term On-The-Job-Training
37-2012	Maids & Housekeeping Cleaners	2,170	2,590	420	19.4	360	11	Moderate-Term On-The-Job-Training
37-2021	Pest Control Workers	180	230	50	27.8	30	10	Short-Term On-The-Job-Training
37-3011	Landscape & Groundskeeping Workers	2,250	2,760	510	22.7	440	11	Short-Term On-The-Job-Training
37-3013	Tree Trimmers & Pruners	180	200	20	11.1	30	11	Short-Term On-The-Job-Training
37-9099	Bldng & Grounds Cleaning & Maint Wrks, All Other	350	380	30	8.6	50	11	Short-Term On-The-Job-Training

**Table 6: Occupational Employment Projections<sup>1,2</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		Openings Due to Separations	BLS Training Level	Education/Experience
		2001 <sup>3</sup>	2008	Number	Percent			
<b>39-0000</b>	<b>Personal Care &amp; Service Occupations</b>	<b>10,060</b>	<b>10,300</b>	<b>240</b>	<b>2.4</b>	<b>2,290</b>		
39-1021	First-Line Sups/Mgrs of Personal Service Workers	230	260	30	13.0	50	8	Work Experience
39-2021	Nonfarm Animal Caretakers	250	200	-50	-20.0	30	11	Short-Term On-The-Job-Training
39-3021	Motion Picture Projectionists	50	60	10	20.0	10	11	Short-Term On-The-Job-Training
39-3031	Ushers, Lobby Attendants, & Ticket Takers	270	310	40	14.8	170	11	Short-Term On-The-Job-Training
39-3091	Amusement & Recreation Attendants	500	560	60	12.0	130	11	Short-Term On-The-Job-Training
39-3099	Entertainment Attendants & Rel Workers, All Other	170	190	20	11.8	40	11	Short-Term On-The-Job-Training
39-5012	Hairdressers, Hairstylists, & Cosmetologists	420	400	-20	-4.8	70	7	Post-Secondary Vocational Education
39-5092	Manicurists & Pedicurists	190	210	20	10.5	30	7	Post-Secondary Vocational Education
39-5094	Skin Care Specialists	50	50	0	0.0	10	7	Post-Secondary Vocational Education
39-6011	Baggage Porters & Bellhops	360	380	20	5.6	90	11	Short-Term On-The-Job-Training
39-6012	Concierges	70	80	10	14.3	20	8	Work Experience
39-6021	Tour Guides & Escorts	80	90	10	12.5	20	10	Moderate-Term On-The-Job-Training
39-6022	Travel Guides	50	50	0	0.0	10	9	Long-Term On-The-Job-Training
39-6031	Flight Attendants	4,710	4,290	-420	-8.9	1,130	9	Long-Term On-The-Job-Training
39-9011	Child Care Workers	670	830	160	23.9	180	11	Short-Term On-The-Job-Training
39-9021	Personal & Home Care Aides	370	480	110	29.7	50	11	Short-Term On-The-Job-Training
39-9031	Fitness Trainers & Aerobics Instructors	660	810	150	22.7	110	7	Post-Secondary Vocational Education
39-9032	Recreation Workers	690	750	60	8.7	100	5	Bachelor's Degree
39-9099	Personal Care & Service Workers, All Other	260	280	20	7.7	40	11	Short-Term On-The-Job-Training
<b>41-0000</b>	<b>Sales &amp; Related Occupations</b>	<b>42,680</b>	<b>46,520</b>	<b>3,840</b>	<b>9.0</b>	<b>10,260</b>		
41-1011	First-Line Sups/Mgrs of Retail Sales Workers	3,150	3,560	410	13.0	330	8	Work Experience
41-1012	First-Line Sups/Mgrs of Non-Retail Sales Workers	1,090	1,080	-10	-0.9	110	8	Work Experience
41-2011	Cashiers	8,670	10,020	1,350	15.6	3,110	11	Short-Term On-The-Job-Training
41-2021	Counter & Rental Clerks	1,300	1,520	220	16.9	460	11	Short-Term On-The-Job-Training
41-2022	Parts Salespersons	380	340	-40	-10.5	80	10	Moderate-Term On-The-Job-Training
41-2031	Retail Salespersons	12,060	13,540	1,480	12.3	3,500	11	Short-Term On-The-Job-Training
41-3011	Advertising Sales Agents	880	980	100	11.4	130	10	Moderate-Term On-The-Job-Training
41-3021	Insurance Sales Agents	440	430	-10	-2.3	80	5	Bachelor's Degree
41-3031	Securities, Commodities, & Financial Serv Sales Agents	1,240	1,310	70	5.6	70	5	Bachelor's Degree
41-3041	Travel Agents	560	540	-20	-3.6	90	7	Post-Secondary Vocational Education
41-4011	Sales Reps, Wholesale & Mfg, Tech & Scientific Products	3,040	3,060	20	0.7	580	10	Moderate-Term On-The-Job-Training
41-4012	Sales Reps, Wholesale & Mfg, Ex Tech & Scientific Products	4,050	3,760	-290	-7.2	740	10	Moderate-Term On-The-Job-Training

**Table 6: Occupational Employment Projections<sup>1,2</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		Openings Due to Separations	BLS Training Level	Education/Experience
		2001 <sup>3</sup>	2008	Number	Percent			
41-9011	Demonstrators & Product Promoters	630	740	110	17.5	160	10	Moderate-Term On-The-Job-Training
41-9021	Real Estate Brokers	330	320	-10	-3.0	40	8	Work Experience
41-9022	Real Estate Sales Agents	210	210	0	0.0	30	7	Post-Secondary Vocational Education
41-9031	Sales Engineers	650	710	60	9.2	120	5	Bachelor's Degree
41-9041	Telemarketers	890	940	50	5.6	130	11	Short-Term On-The-Job-Training
41-9091	Dr-to-Di Sales Wrkrs, Nws & St Vndrs, & Rel Wrks	130	140	10	7.7	20	11	Short-Term On-The-Job-Training
41-9099	Sales & Related Workers, All Other	2,970	3,310	340	11.4	480	10	Moderate-Term On-The-Job-Training
<b>43-0000</b>	<b>Office &amp; Administrative Support Occupations</b>	<b>66,310</b>	<b>67,950</b>	<b>1,640</b>	<b>2.5</b>	<b>9,520</b>		
43-1011	First-Line Sups/Mgrs of Office & Admin Support	4,060	4,130	70	1.7	540	8	Work Experience
43-2011	Switchboard Operators, Including Answering Service	560	490	-70	-12.5	110	11	Short-Term On-The-Job-Training
43-2021	Telephone Operators	60	40	-20	-33.3	10	11	Short-Term On-The-Job-Training
43-3011	Bill & Account Collectors	1,160	1,240	80	6.9	210	11	Short-Term On-The-Job-Training
43-3021	Billing & Posting Clerks & Machine Operators	1,200	1,160	-40	-3.3	200	11	Short-Term On-The-Job-Training
43-3031	Bookkeeping, Accounting, & Auditing Clerks	4,880	4,780	-100	-2.0	640	10	Moderate-Term On-The-Job-Training
43-3051	Payroll & Timekeeping Clerks	500	490	-10	-2.0	100	11	Short-Term On-The-Job-Training
43-3061	Procurement Clerks	180	160	-20	-11.1	30	11	Short-Term On-The-Job-Training
43-3071	Tellers	620	570	-50	-8.1	200	11	Short-Term On-The-Job-Training
43-4011	Brokerage Clerks	570	520	-50	-8.8	50	10	Moderate-Term On-The-Job-Training
43-4021	Correspondence Clerks	100	100	0	0.0	20	11	Short-Term On-The-Job-Training
43-4041	Credit Authorizers, Checkers, & Clerks	150	150	0	0.0	10	11	Short-Term On-The-Job-Training
43-4051	Customer Service Representatives	6,900	7,730	830	12.0	420	10	Moderate-Term On-The-Job-Training
43-4061	Eligibility Interviewers, Government Programs	50	50	0	0.0	10	10	Moderate-Term On-The-Job-Training
43-4071	File Clerks	820	840	20	2.4	190	11	Short-Term On-The-Job-Training
43-4081	Hotel, Motel, & Resort Desk Clerks	420	510	90	21.4	150	11	Short-Term On-The-Job-Training
43-4111	Interviewers, Except Eligibility & Loan	430	560	130	30.2	70	11	Short-Term On-The-Job-Training
43-4121	Library Assistants, Clerical	240	260	20	8.3	80	11	Short-Term On-The-Job-Training
43-4131	Loan Interviewers & Clerks	250	200	-50	-20.0	10	11	Short-Term On-The-Job-Training
43-4141	New Accounts Clerks	160	170	10	6.3	20	8	Work Experience
43-4151	Order Clerks	1,240	1,020	-220	-17.7	170	11	Short-Term On-The-Job-Training
43-4161	Human Resources Assist, Ex Pay & Timekeeping	530	600	70	13.2	90	11	Short-Term On-The-Job-Training
43-4171	Receptionists & Information Clerks	2,570	2,860	290	11.3	420	11	Short-Term On-The-Job-Training
43-4181	Reservation & Trans Ticket Agents & Travel Clerks	1,880	1,650	-230	-12.2	340	11	Short-Term On-The-Job-Training
43-4199	Information & Record Clerks, All Other	60	60	0	0.0	10	11	Short-Term On-The-Job-Training
43-4999	Financial, Information, & Record Clerks, All Other	580	570	-10	-1.7	50	11	Short-Term On-The-Job-Training
43-5011	Cargo & Freight Agents	1,050	930	-120	-11.4	140	10	Moderate-Term On-The-Job-Training

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**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		Openings Due to Separations	BLS Training Level	Education/Experience
		2001 <sup>3</sup>	2008	Number	Percent			
43-5021	Couriers & Messengers	730	690	-40	-5.5	140	11	Short-Term On-The-Job-Training
43-5031	Police, Fire, & Ambulance Dispatchers	100	100	0	0.0	10	10	Moderate-Term On-The-Job-Training
43-5032	Dispatchers, Except Police, Fire, & Ambulance	480	540	60	12.5	60	10	Moderate-Term On-The-Job-Training
43-5051	Postal Service Clerks	150	150	0	0.0	20	11	Short-Term On-The-Job-Training
43-5052	Postal Service Mail Carriers	590	590	0	0.0	120	11	Short-Term On-The-Job-Training
43-5053	Postal Serv Mail Sort, Processors, & Processing Machine Operators	560	550	-10	-1.8	80	11	Short-Term On-The-Job-Training
43-5061	Production, Planning, & Expediting Clerks	1,300	1,510	210	16.2	160	11	Short-Term On-The-Job-Training
43-5071	Shipping, Receiving, & Traffic Clerks	2,120	2,160	40	1.9	300	11	Short-Term On-The-Job-Training
43-5081	Stock Clerks & Order Fillers	4,200	4,410	210	5.0	1,140	11	Short-Term On-The-Job-Training
43-5111	Weigh, Measure, Check, & Sample, Recordkeeping	390	420	30	7.7	70	11	Short-Term On-The-Job-Training
43-6011	Executive Secretaries & Administrative Assistants	6,310	6,710	400	6.3	760	10	Moderate-Term On-The-Job-Training
43-6012	Legal Secretaries	560	610	50	8.9	70	7	Post-Secondary Vocational Education
43-6013	Medical Secretaries	960	990	30	3.1	110	7	Post-Secondary Vocational Education
43-6014	Secretaries, Except Legal, Medical, & Executive	3,410	3,310	-100	-2.9	390	10	Moderate-Term On-The-Job-Training
43-9011	Computer Operators	890	750	-140	-15.7	100	10	Moderate-Term On-The-Job-Training
43-9021	Data Entry Keyers	1,320	1,270	-50	-3.8	140	10	Moderate-Term On-The-Job-Training
43-9022	Word Processors & Typists	480	420	-60	-12.5	60	10	Moderate-Term On-The-Job-Training
43-9031	Desktop Publishers	80	110	30	37.5	10	7	Post-Secondary Vocational Education
43-9041	Insurance Claims & Policy Processing Clerks	360	310	-50	-13.9	40	10	Moderate-Term On-The-Job-Training
43-9051	Mail Clerks & Mail Mach Ops, Ex Postal Service	450	450	0	0.0	90	11	Short-Term On-The-Job-Training
43-9061	Office Clerks, General	7,560	8,010	450	6.0	1,050	11	Short-Term On-The-Job-Training
43-9071	Office Machine Operators, Except Computer	370	330	-40	-10.8	90	11	Short-Term On-The-Job-Training
43-9081	Proofreaders & Copy Markers	80	70	-10	-12.5	20	11	Short-Term On-The-Job-Training
43-9199	Office & Administrative Support Workers, All Other	1,630	1,640	10	0.6	200	10	Moderate-Term On-The-Job-Training
<b>45-0000</b>	<b>Farming, Fishing, &amp; Forestry Occupations</b>	<b>190</b>	<b>190</b>	<b>0</b>	<b>0.0</b>	<b>20</b>		
45-2092	Farmworkers & Labor, Crop, Nursery, & Greenhouse	90	100	10	11.1	10	11	Short-Term On-The-Job-Training
45-2093	Farmworkers, Farm & Ranch Animals	50	40	-10	-20.0	10	11	Short-Term On-The-Job-Training
<b>47-0000</b>	<b>Construction &amp; Extraction Occupations</b>	<b>16,650</b>	<b>16,000</b>	<b>-650</b>	<b>-3.9</b>	<b>2,130</b>		
47-1011	First-Line Sups/Mgrs of Construction Trades	1,380	1,330	-50	-3.6	210	8	Work Experience
47-2021	Brickmasons & Blockmasons	90	90	0	0.0	10	9	Long-Term On-The-Job-Training

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**2001 – 2008**  
**San Mateo County**

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		2001 <sup>3</sup>	2008	Number	Percent			
47-2031	Carpenters	3,380	3,200	-180	-5.3	390	9	Long-Term On-The-Job-Training
47-2041	Carpet Installers	140	130	-10	-7.1	20	10	Moderate-Term On-The-Job-Training
47-2042	Floor Layers, Except Carpet, Wood, & Hard Tiles	50	50	0	0.0	10	10	Moderate-Term On-The-Job-Training
47-2043	Floor Sanders & Finishers	80	70	-10	-12.5	10	10	Moderate-Term On-The-Job-Training
47-2044	Tile & Marble Setters	370	350	-20	-5.4	40	9	Long-Term On-The-Job-Training
47-2051	Cement Masons & Concrete Finishers	700	620	-80	-11.4	40	9	Long-Term On-The-Job-Training
47-2061	Construction Laborers	2,660	2,550	-110	-4.1	160	10	Moderate-Term On-The-Job-Training
47-2071	Paving, Surfacing, & Tamping Equipment Operators	50	50	0	0.0	10	10	Moderate-Term On-The-Job-Training
47-2073	Operating Engineers & Oth Const Equipment Operators	410	390	-20	-4.9	60	10	Moderate-Term On-The-Job-Training
47-2081	Drywall & Ceiling Tile Installers	430	410	-20	-4.7	30	10	Moderate-Term On-The-Job-Training
47-2082	Tapers	190	180	-10	-5.3	10	10	Moderate-Term On-The-Job-Training
47-2111	Electricians	1,160	1,180	20	1.7	150	9	Long-Term On-The-Job-Training
47-2121	Glaziers	190	180	-10	-5.3	20	9	Long-Term On-The-Job-Training
47-2141	Painters, Construction & Maintenance	920	890	-30	-3.3	110	10	Moderate-Term On-The-Job-Training
47-2151	Pipelayers	50	50	0	0.0	10	10	Moderate-Term On-The-Job-Training
47-2152	Plumbers, Pipefitters, & Steamfitters	1,030	990	-40	-3.9	110	9	Long-Term On-The-Job-Training
47-2161	Plasterers & Stucco Masons	220	210	-10	-4.5	30	9	Long-Term On-The-Job-Training
47-2171	Reinforcing Iron & Rebar Workers	90	80	-10	-11.1	10	9	Long-Term On-The-Job-Training
47-2181	Roofers	410	390	-20	-4.9	60	10	Moderate-Term On-The-Job-Training
47-2211	Sheet Metal Workers	670	690	20	3.0	100	10	Moderate-Term On-The-Job-Training
47-2221	Structural Iron & Steel Workers	70	70	0	0.0	10	9	Long-Term On-The-Job-Training
47-3011	Helpers--Brick, Block, Stonemasons, & Tile & Marble Setters	60	60	0	0.0	20	11	Short-Term On-The-Job-Training
47-3012	Helpers--Carpenters	340	300	-40	-11.8	110	11	Short-Term On-The-Job-Training
47-3013	Helpers--Electricians	170	170	0	0.0	60	11	Short-Term On-The-Job-Training
47-3014	Helpers--Paint, Paperhanger, Plaster, & Stucco Masons	50	40	-10	-20.0	20	11	Short-Term On-The-Job-Training
47-3015	Helpers--Pipelay., Plumber, Pipefitter, & Steamfitters	270	250	-20	-7.4	90	11	Short-Term On-The-Job-Training
47-3016	Helpers--Roofers	70	70	0	0.0	20	11	Short-Term On-The-Job-Training
47-3019	Helpers, Construction Trades, All Other	80	90	10	12.5	30	11	Short-Term On-The-Job-Training
47-4011	Construction & Building Inspectors	160	150	-10	-6.3	20	8	Work Experience
47-4021	Elevator Installers & Repairers	100	100	0	0.0	20	9	Long-Term On-The-Job-Training
47-4051	Highway Maintenance Workers	60	60	0	0.0	10	10	Moderate-Term On-The-Job-Training
47-4071	Septic Tank Servicers & Sewer Pipe Cleaners	60	50	-10	-16.7	10	10	Moderate-Term On-The-Job-Training
47-4099	Construction & Related Workers, All Other	450	470	20	4.4	100	10	Moderate-Term On-The-Job-Training
<b>49-0000</b>	<b>Installation, Maintenance, &amp; Repair Occupations</b>	<b>16,560</b>	<b>16,820</b>	<b>260</b>	<b>1.6</b>	<b>2,630</b>		
49-1011	First-Line Sups/Mgrs of Mechanics, Installers & Repairers	930	1,000	70	7.5	170	8	Work Experience

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**2001 – 2008**  
**San Mateo County**

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		2001 <sup>3</sup>	2008	Number	Percent			
49-2011	Computer, Automated Teller, & Office Mach Repairers	1,130	1,180	50	4.4	90	7	Post-Secondary Vocational Education
49-2021	Radio Mechanics	210	140	-70	-33.3	20	7	Post-Secondary Vocational Education
49-2022	Telecomm Equip Install & Repair, Ex Line Installers	660	600	-60	-9.1	80	7	Post-Secondary Vocational Education
49-2094	Electrical & Electronics Repair, Comm & Industrial Equipment	220	240	20	9.1	30	7	Post-Secondary Vocational Education
49-2095	Electrical & Electronics Repair, Powerhouse, Substation & Rela	50	50	0	0.0	10	7	Post-Secondary Vocational Education
49-2096	Electronic Equip Install & Repair, Motor Vehicles	50	50	0	0.0	10	7	Post-Secondary Vocational Education
49-2098	Security & Fire Alarm Systems Installers	160	150	-10	-6.3	20	7	Post-Secondary Vocational Education
49-2099	Electrical & Electronic Equip, Mechs, Installers	100	110	10	10.0	20	7	Post-Secondary Vocational Education
49-3011	Aircraft Mechanics & Service Technicians	2,540	2,370	-170	-6.7	360	7	Post-Secondary Vocational Education
49-3021	Automotive Body & Related Repairers	630	680	50	7.9	110	9	Long-Term On-The-Job-Training
49-3022	Automotive Glass Installers & Repairers	60	70	10	16.7	10	9	Long-Term On-The-Job-Training
49-3023	Automotive Service Technicians & Mechanics	1,870	2,020	150	8.0	320	7	Post-Secondary Vocational Education
49-3031	Bus & Truck Mechs & Diesel Engine Specialists	390	410	20	5.1	70	7	Post-Secondary Vocational Education
49-3042	Mobile Heavy Equip Mechanics, Except Engines	90	100	10	11.1	20	7	Moderate-Term On-The-Job-Training
49-3091	Bicycle Repairers	60	70	10	16.7	20	10	Short-Term On-The-Job-Training
49-3093	Tire Repairers & Changers	210	200	-10	-4.8	60	11	Short-Term On-The-Job-Training
49-9021	Heating, Air Conditioning, & Refrigeration Mechanics & Insta	280	290	10	3.6	20	9	Long-Term On-The-Job-Training
49-9031	Home Appliance Repairers	70	90	20	28.6	10	9	Long-Term On-The-Job-Training
49-9041	Industrial Machinery Mechanics	180	200	20	11.1	40	9	Long-Term On-The-Job-Training
49-9042	Maintenance & Repair Workers, General	2,670	2,680	10	0.4	240	9	Long-Term On-The-Job-Training
49-9043	Maintenance Workers, Machinery	90	90	0	0.0	20	9	Long-Term On-The-Job-Training
49-9051	Electrical Power-Line Installers & Repairers	80	90	10	12.5	20	9	Long-Term On-The-Job-Training
49-9052	Telecommunications Line Installers & Repairers	460	530	70	15.2	60	9	Long-Term On-The-Job-Training
49-9062	Medical Equipment Repairers	60	60	0	0.0	10	10	Moderate-Term On-The-Job-Training
49-9091	Coin, Vend, & Amusement Mach Servicers & Repairers	220	220	0	0.0	30	10	Short-Term On-The-Job-Training
49-9098	Helpers--Installation, Maint, & Repair Workers	300	320	20	6.7	110	11	Moderate-Term On-The-Job-Training
49-9099	Installation, Maint, & Repair Workers, All Other	2,790	2,810	20	0.7	650	9	Long-Term On-The-Job-Training
<b>51-0000 Production Occupations</b>		<b>20,940</b>	<b>21,340</b>	<b>400</b>	<b>1.9</b>	<b>3,370</b>	<b>8</b>	<b>Work Experience</b>
51-1011	First-Line Sups/Mgrs of Prod & Operating Wkrs	1,640	1,680	40	2.4	300	11	Short-Term On-The-Job-Training
51-2021	Coil Winders, Tapers, & Finishers	110	130	20	18.2	20	11	Short-Term On-The-Job-Training
51-2022	Electrical & Electronic Equipment Assemblers	1,100	1,050	-50	-4.5	190	11	Short-Term On-The-Job-Training
51-2023	Electromechanical Equipment Assemblers	200	220	20	10.0	40	11	Short-Term On-The-Job-Training
51-2041	Structural Metal Fabricators & Fitters	140	160	20	14.3	20	10	Moderate-Term On-The-Job-Training
51-2092	Team Assemblers	2,660	2,700	40	1.5	320	10	Moderate-Term On-The-Job-Training
51-2099	Assemblers & Fabricators, All Other	530	570	40	7.5	70	10	Moderate-Term On-The-Job-Training

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		2001 <sup>3</sup>	2008	Number	Percent			
51-3011	Bakers	660	720	60	9.1	80	9	Long-Term On-The-Job-Training
51-3021	Butchers & Meat Cutters	430	420	-10	-2.3	70	9	Long-Term On-The-Job-Training
51-3022	Meat, Poultry, & Fish Cutters & Trimmers	80	90	10	12.5	20	11	Short-Term On-The-Job-Training
51-3091	Food & Tobac Roast, Bake, & Dry Mach Ops & Tenders	140	120	-20	-14.3	20	11	Short-Term On-The-Job-Training
51-3092	Food Batchmakers	250	240	-10	-4.0	40	11	Short-Term On-The-Job-Training
51-3093	Food Cooking Machine Operators & Tenders	50	40	-10	-20.0	10	11	Short-Term On-The-Job-Training
51-3099	Food Processing Workers, All Other	150	160	10	6.7	30	11	Short-Term On-The-Job-Training
51-4011	Comp-Controlled Mach Tool Ops, Metal & Plastic Extrud & Draw Mach Setters, Ops, & Tends, Metal & Plastic	150	160	10	6.7	40	9	Long-Term On-The-Job-Training
51-4021	Extrud & Draw Mach Setters, Ops, & Tends, Metal & Plastic	170	190	20	11.8	30	10	Moderate-Term On-The-Job-Training
51-4022	Forging Mach Setters, Ops, & Tends, Metal & Plastic	80	80	0	0.0	20	10	Moderate-Term On-The-Job-Training
51-4023	Rolling Mach Setters, Ops, & Tends, Metal & Plastic	140	140	0	0.0	30	10	Moderate-Term On-The-Job-Training
51-4031	Cutting, Punching, & Press Machine Setters, Ops, Tend & Drill & Bore Mach Tool Set, Ops, & Tend, Metal & Plastic	360	310	-50	-13.9	50	10	Moderate-Term On-The-Job-Training
51-4032	Grind, Lap, Polish, & Buff Mach Tool Set, Ops, Tends, Metl & Lathe & Turn Mach Tool Set, Ops, & Tend, Metl & Plastic	80	70	-10	-12.5	20	10	Moderate-Term On-The-Job-Training
51-4033	Mill & Plan Mach Set, Ops, & Tend, Metal & Plastic	200	190	-10	-5.0	30	10	Moderate-Term On-The-Job-Training
51-4034	Mill & Plan Mach Set, Ops, & Tend, Metal & Plastic	50	50	0	0.0	10	10	Moderate-Term On-The-Job-Training
51-4035	Machinists	140	130	-10	-7.1	30	10	Moderate-Term On-The-Job-Training
51-4041	Mold, Core, & Cast Mach, Set, Ops & Tend, Metl & Plastic	1,220	1,250	30	2.5	180	9	Long-Term On-The-Job-Training
51-4072	Mult Mach Tool Set, Ops, & Tend,Metal & Plastic	210	230	20	9.5	30	10	Moderate-Term On-The-Job-Training
51-4081	Tool & Die Makers	180	190	10	5.6	20	10	Moderate-Term On-The-Job-Training
51-4111	Weiders, Cutters, Solderers, & Brazers	90	90	0	0.0	20	9	Long-Term On-The-Job-Training
51-4121	Heat Treat Equip Set, Ops, & Tend, Metal & Plastic	600	650	50	8.3	120	7	Post-Secondary Vocational Education
51-4191	Plate & Coat Mach Set, Ops, & Tend, Metal & Plastic	90	80	-10	-11.1	10	10	Moderate-Term On-The-Job-Training
51-4193	Metal Workers & Plastic Workers, All Other	180	160	-20	-11.1	20	10	Moderate-Term On-The-Job-Training
51-4199	Metal Workers & Plastic Workers, All Other	320	320	0	0.0	50	10	Moderate-Term On-The-Job-Training
51-5011	Bindery Workers	350	330	-20	-5.7	60	10	Moderate-Term On-The-Job-Training
51-5021	Job Printers	90	80	-10	-11.1	20	9	Long-Term On-The-Job-Training
51-5022	Prepress Technicians & Workers	230	180	-50	-21.7	40	9	Long-Term On-The-Job-Training
51-5023	Printing Machine Operators	410	390	-20	-4.9	70	10	Moderate-Term On-The-Job-Training
51-6011	Laundry & Dry-Cleaning Workers	450	510	60	13.3	90	10	Moderate-Term On-The-Job-Training
51-6021	Pressers, Textile, Garment, & Related Materials	450	500	50	11.1	50	11	Short-Term On-The-Job-Training
51-6031	Sewing Machine Operators	250	250	0	0.0	20	10	Moderate-Term On-The-Job-Training
51-6052	Tailors, Dressmakers, & Custom Sewers	100	100	0	0.0	20	8	Work Experience
51-6093	Upholsterers	50	50	0	0.0	10	9	Long-Term On-The-Job-Training
51-6099	Textile, Apparel, & Furnishings Workers, All Other	110	120	10	9.1	10	10	Moderate-Term On-The-Job-Training
51-7011	Cabinetmakers & Bench Carpenters	230	220	-10	-4.3	50	9	Long-Term On-The-Job-Training
51-7021	Furniture Finishers	70	70	0	0.0	20	9	Long-Term On-The-Job-Training
51-7042	Woodwork Mach Setters, Ops, & Tenders, Ex Sawing	100	100	0	0.0	30	10	Moderate-Term On-The-Job-Training
51-7099	Woodworkers, All Other	90	80	-10	-11.1	20	10	Moderate-Term On-The-Job-Training

**Table 6: Occupational Employment Projections<sup>1,2</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change		Openings Due to Separations	BLS Training Level	Education/Experience
		2001 <sup>3</sup>	2008	Number	Percent			
51-8021	Stationary Engineers & Boiler Operators	190	190	0	0.0	40	9	Long-Term On-The-Job-Training
51-8031	Water & Liquid Waste Treat Plant & System Ops	120	130	10	8.3	30	9	Long-Term On-The-Job-Training
51-8099	Plant & System Operators, All Other	260	300	40	15.4	50	9	Long-Term On-The-Job-Training
51-9011	Chemical Equipment Operators & Tenders	70	80	10	14.3	10	10	Moderate-Term On-The-Job-Training
51-9021	Crushing, Grinding, & Polishing Mach Setters, Ops & Tender	50	50	0	0.0	10	10	Moderate-Term On-The-Job-Training
51-9022	Grinding & Polishing Workers, Hand	50	50	0	0.0	10	10	Moderate-Term On-The-Job-Training
51-9023	Mix & Blend Mach Setters, Ops, & Tenders	110	130	20	18.2	20	10	Moderate-Term On-The-Job-Training
51-9031	Cutters & Trimmers, Hand	80	80	0	0.0	10	11	Short-Term On-The-Job-Training
51-9032	Cutting & Slicing Mach Setters, Ops, & Tenders	270	250	-20	-7.4	30	10	Moderate-Term On-The-Job-Training
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	1,310	1,360	50	3.8	210	10	Moderate-Term On-The-Job-Training
51-9081	Dental Laboratory Technicians	220	230	10	4.5	40	9	Long-Term On-The-Job-Training
51-9111	Packaging & Filling Machine Operators & Tenders	400	400	0	0.0	60	11	Short-Term On-The-Job-Training
51-9121	Coat, Paint, & Spray Mach Set, Ops & Tenders	80	80	0	0.0	10	10	Moderate-Term On-The-Job-Training
51-9122	Painters, Transportation Equipment	70	70	0	0.0	10	10	Moderate-Term On-The-Job-Training
51-9123	Painting, Coating, & Decorating Workers	100	100	0	0.0	20	11	Short-Term On-The-Job-Training
51-9191	Cementing & Gluing Machine Operators & Tenders	350	370	20	5.7	60	10	Moderate-Term On-The-Job-Training
51-9194	Etchers & Engravers	50	50	0	0.0	10	9	Long-Term On-The-Job-Training
51-9195	Molders, Shapers, & Casters, Except Metal & Plastic	70	60	-10	-14.3	10	10	Moderate-Term On-The-Job-Training
51-9196	Paper Goods Machine Setters, Ops, & Tenders	180	160	-20	-11.1	20	10	Moderate-Term On-The-Job-Training
51-9198	Helpers--Production Workers	830	850	20	2.4	150	11	Short-Term On-The-Job-Training
51-9199	Production Workers, All Other	700	780	80	11.4	110	10	Moderate-Term On-The-Job-Training
<b>53-0000</b>	<b>Transportation &amp; Material Moving Occupations</b>		<b>25,690</b>	<b>26,580</b>	<b>890</b>	<b>3.5</b>	<b>4,660</b>	
	First-Line Sups/Mgrs of Help, Labor, & Mat Movers, Hand	310	320	10	3.2	50	8	Work Experience
53-1021	First-Line Sups/Mgrs of Trans & Mat-Moving Machine & Vehi	480	500	20	4.2	70	8	Work Experience
53-1031	First-Line Sups/Mgrs of Trans & Mat-Moving Machine & Vehi	1,970	1,690	-280	-14.2	290	5	Bachelor's Degree
53-2011	Airline Pilots, Copilots, & Flight Engineers	340	330	-10	-2.9	100	10	Moderate-Term On-The-Job-Training
53-2099	Air Transportation Workers, All Other	50	60	10	20.0	0	10	Moderate-Term On-The-Job-Training
53-3011	Ambulance Drivers & Attendants, Ex EMTs	560	640	80	14.3	110	10	Moderate-Term On-The-Job-Training
53-3021	Bus Drivers, Transit & Intercity	640	670	30	4.7	120	11	Short-Term On-The-Job-Training
53-3022	Bus Drivers, School	730	690	-40	-5.5	70	11	Short-Term On-The-Job-Training
53-3031	Driver/Sales Workers	1,510	1,590	80	5.3	150	10	Moderate-Term On-The-Job-Training
53-3032	Truck Drivers, Heavy & Tractor-Trailer	3,540	3,660	120	3.4	340	11	Short-Term On-The-Job-Training
53-3033	Truck Drivers, Light or Delivery Services	810	980	170	21.0	50	11	Short-Term On-The-Job-Training
53-3041	Taxi Drivers & Chauffeurs	600	670	70	11.7	70	11	Short-Term On-The-Job-Training

**Table 6: Occupational Employment Projections<sup>1,2</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Employment Change Percent	Openings Due to Separations	BLS Training Level	Education/Experience
		2001 <sup>3</sup>	2008				
53-4031	Railroad Conductors & Yardmasters	50	50	0	0.0	20	8
53-6021	Parking Lot Attendants	550	620	70	12.7	70	11
53-6031	Service Station Attendants	220	220	0	0.0	80	11
53-6051	Transportation Inspectors	320	330	10	3.1	60	8
53-6099	Transportation Workers, All Other	570	560	-10	-1.8	140	11
53-7011	Conveyor or Operators & Tenders	110	110	0	0.0	20	11
53-7032	Excavating & Loading Machine & Dragline Operators	90	90	0	0.0	20	10
53-7041	Hoist & Winch Operators	70	80	10	14.3	10	10
53-7051	Industrial Truck & Tractor Operators	790	780	-10	-1.3	80	11
53-7061	Cleaners of Vehicles & Equipment	2,150	2,350	200	9.3	600	11
53-7062	Laborers & Freight, Stock, & Material Movers, Hand	5,690	5,910	220	3.9	1,400	11
53-7063	Machine Feeders & Offbearers	290	230	-60	-20.7	60	11
53-7064	Packers & Packagers, Hand	2,370	2,550	180	7.6	440	11
53-7072	Pump Operators, Except Wellhead Pumpers	100	90	-10	-10.0	20	10
53-7081	Refuse & Recyclable Material Collectors	350	370	20	5.7	120	11
53-7121	Tank Car, Truck, & Ship Loaders	130	130	0	0.0	30	10
53-7199	Material Moving Workers, All Other	300	310	10	3.3	70	11
99-9999	Occupation Unknown	240	220	-20	-8.3	50	

<sup>1</sup>Employment and projections contained in these tables are considered estimates. See introduction for an explanation of data limitations.

<sup>2</sup>Subtotals may not add to the county totals due to the rounding and the suppression of data. Some data are suppressed because of confidentiality, excessive standard error, or other issues.

<sup>3</sup>March 2001 Benchmark.

\*This occupation is a summary occupation. There are no separations currently available for this SOC code. It is anticipated that in the future, this category will be broken out into more detailed occupations.

**Table 7: Occupations with the Most Job Openings<sup>1</sup>**  
**(Growth plus Separations)**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Number of Job Openings	BLS Training Level	Education/Experience
41-2031	Retail Salespersons	4,980	11	Short-Term On-The-Job-Training
41-2011	Cashiers	4,460	11	Short-Term On-The-Job-Training
35-3031	Waiters & Waitresses	2,720	11	Short-Term On-The-Job-Training
15-1031	Computer Software Engineers, Applications	2,390	5	Bachelor's Degree
35-3021	Comb Food Prep & Serving Wrkrs, Incl Fast Food	2,060	11	Short-Term On-The-Job-Training
15-1041	Computer Support Specialists	1,890	6	Associate Degree
53-7062	Laborers & Freight, Stock, & Material Movers, Hand	1,620	11	Short-Term On-The-Job-Training
37-2011	Janitors & Cleaners, Ex Maids & Housekeeping Cleaners	1,500	11	Short-Term On-The-Job-Training
43-9061	Office Clerks, General	1,500	11	Short-Term On-The-Job-Training
11-1021	General & Operations Managers	1,460	4	Bachelor's or Higher and Some Work Exp.
33-9032	Security Guards	1,430	11	Short-Term On-The-Job-Training
43-5081	Stock Clerks & Order Fillers	1,350	11	Short-Term On-The-Job-Training
43-4051	Customer Service Representatives	1,250	10	Moderate-Term On-The-Job-Training
43-6011	Executive Secretaries & Administrative Assistants	1,160	10	Moderate-Term On-The-Job-Training
35-3022	Counter Attends, Cafe, Food Concession, and Coffee Shop	1,080	11	Short-Term On-The-Job-Training
15-1021	Computer Programmers	1,050	5	Bachelor's Degree
35-2021	Food Preparation Workers	980	11	Short-Term On-The-Job-Training
29-1111	Registered Nurses	970	6	Associate Degree
15-1032	Computer Software Engineers, Systems Software	960	5	Bachelor's Degree
37-3011	Landscaping & Groundskeeping Workers	950	11	Short-Term On-The-Job-Training
53-7061	Cleaners of Vehicles & Equipment	800	11	Short-Term On-The-Job-Training
15-1051	Computer Systems Analysts	800	5	Bachelor's Degree
37-2012	Maids & Housekeeping Cleaners	780	11	Short-Term On-The-Job-Training
15-1071	Network & Computer Systems Administrators	780	5	Bachelor's Degree
41-1011	First-Line Sups/Mgrs of Retail Sales Workers	740	8	Work Experience
11-3021	Computer & Information Systems Managers	730	4	Bachelor's or Higher and Some Work Exp.
43-4171	Receptionists & Information Clerks	710	11	Short-Term On-The-Job-Training
39-6031	Flight Attendants *	710	9	Long-Term On-The-Job-Training
41-2021	Counter & Rental Clerks	680	11	Short-Term On-The-Job-Training
19-2031	Chemists	640	5	Bachelor's Degree

**Table 7: Occupations with the Most Job Openings<sup>1</sup>**  
**(Growth plus Separations)**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Number of Job Openings	BLS Training Level	Education/Experience
25-2021	Elementary School Teachers, Except Special Ed	630	5	Bachelor's Degree
53-7064	Packers & Packagers, Hand	620	11	Short-Term On-The-Job-Training
43-1011	First-Line Sups/Mgrs of Office & Admin Support	610	8	Work Experience
41-4011	Sales Reps, Wholesale & Mfg, Tech & Scientific Products	600	10	Moderate-Term On-The-Job-Training
35-2014	Cooks, Restaurant	590	9	Long-Term On-The-Job-Training
25-9041	Teacher Assistants	580	11	Short-Term On-The-Job-Training
11-1011	Chief Executives	560	4	Bachelor's or Higher and Some Work Exp.
13-2011	Accountants & Auditors	550	5	Bachelor's Degree
43-3031	Bookkeeping, Accounting, & Auditing Clerks	540	10	Moderate-Term On-The-Job-Training
15-1081	Network Systems & Data Communications Analysts	510	5	Bachelor's Degree
11-2022	Sales Managers	490	4	Bachelor's or Higher and Some Work Exp.
11-3031	Financial Managers	480	4	Bachelor's or Higher and Some Work Exp.
49-3023	Automotive Service Technicians	470	7	Post-Secondary Vocational Education
53-3033	Truck Drivers, Light or Delivery Services	460	11	Short-Term On-The-Job-Training
41-4012	Sales Reps, Wholesale & Mfg, Ex Tech & Scientific Products *	450	10	Moderate-Term On-The-Job-Training
35-3011	Bartenders	430	11	Short-Term On-The-Job-Training
13-1111	Management Analysts	410	4	Bachelor's or Higher and Some Work Exp.
33-3051	Police & Sheriff's Patrol Officers	410	9	Long-Term On-The-Job-Training
35-2015	Cooks, Short Order	370	11	Short-Term On-The-Job-Training
35-9021	Dishwashers	370	11	Short-Term On-The-Job-Training
<b>TOTAL OF THESE OCCUPATIONS</b>				<b>53,260</b>

<sup>1</sup>Excludes All Other categories.

\*This occupation appears because of the high number of separations, not growth.

**Table 8: Occupations with Projected Job Loss<sup>1</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Number of Jobs Lost	Openings due to Separations	BLS Training Level	Education/Experience
		2001 <sup>2</sup>	2008				
39-6031	Flight Attendants	4,710	4,290	-420	1,130	9	Long-Term On-The-Job-Training
41-4012	Sales Reps, Whlsale & Mfg, Ex Tech & Scientific Products	4,050	3,760	-290	740	10	Moderate-Term On-The-Job-Training
53-2011	Airline Pilots, Copilots, & Flight Engineers	1,970	1,690	-280	290	5	Bachelor's Degree
43-4181	Reservation & Trans Ticket Agents & Travel Clerks	1,880	1,650	-230	340	11	Short-Term On-The-Job-Training
43-4151	Order Clerks	1,240	1,020	-220	170	11	Short-Term On-The-Job-Training
47-2031	Carpenters	3,380	3,200	-180	390	9	Long-Term On-The-Job-Training
49-3011	Aircraft Mechanics & Service Technicians	2,540	2,370	-170	360	7	Post-Secondary Vocational Education
43-9011	Computer Operators	890	750	-140	100	10	Moderate-Term On-The-Job-Training
43-5011	Cargo & Freight Agents	1,050	930	-120	140	10	Moderate-Term On-The-Job-Training
47-2061	Construction Laborers	2,660	2,550	-110	160	10	Moderate-Term On-The-Job-Training
43-3031	Bookkeeping, Accounting, & Auditing Clerks	4,880	4,780	-100	640	10	Moderate-Term On-The-Job-Training
43-6014	Secretaries, Except Legal, Medical, and Executive	3,410	3,310	-100	390	10	Moderate-Term On-The-Job-Training
47-2051	Cement Masons & Concrete Finishers	700	620	-80	40	9	Long-Term On-The-Job-Training
43-2011	Switchboard Operators, Including Answering Service	560	490	-70	110	11	Short-Term On-The-Job-Training
49-2021	Radio Mechanics	210	140	-70	20	7	Post-Secondary Vocational Education
49-2022	Telecomm Equip Install & Repair, Ex Line Installers	660	600	-60	80	7	Post-Secondary Vocational Education
43-9022	Word Processors & Typists	480	420	-60	60	10	Moderate-Term On-The-Job-Training
53-7063	Machine Feeders & Offbearers	290	230	-60	60	11	Short-Term On-The-Job-Training
35-9021	Dishwashers	1,540	1,490	-50	420	11	Short-Term On-The-Job-Training
47-1011	First-Line Sups/Mgrs of Construction Trades	1,380	1,330	-50	210	8	Work Experience
43-3071	Tellers	620	570	-50	200	11	Short-Term On-The-Job-Training
51-2022	Electrical & Electronic Equipment Assemblers	1,100	1,050	-50	190	11	Short-Term On-The-Job-Training
43-9021	Data Entry Keyers	1,320	1,270	-50	140	10	Moderate-Term On-The-Job-Training
17-3021	Aerospace Engineering & Operations Technicians	450	400	-50	60	6	Associate Degree
43-4011	Brokerage Clerks	570	520	-50	50	10	Moderate-Term On-The-Job-Training
51-4031	Cutting, Punching, & Press Machine Setters, Ops, Tend & Me	360	310	-50	50	10	Moderate-Term On-The-Job-Training
43-9041	Insurance Claims & Policy Processing Clerks	360	310	-50	40	10	Moderate-Term On-The-Job-Training
51-5022	Prepress Technicians & Workers	230	180	-50	40	9	Long-Term On-The-Job-Training
39-2021	Nonfarm Animal Caretakers	250	200	-50	30	11	Short-Term On-The-Job-Training
43-4131	Loan Interviewers & Clerks	250	200	-50	10	11	Short-Term On-The-Job-Training

**Table 8: Occupations with Projected Job Loss<sup>1</sup>**  
**2001 – 2008**  
**San Mateo County**

SOC Code	Occupation	Annual Average Employment		Number of Jobs Lost	Openings due to Separations	BLS Training Level	Education/Experience
		2001 <sup>2</sup>	2008				
43-3021	Billing & Posting Clerks & Machine Operators	1,200	1,160	-40	200	11	Short-Term On-The-Job-Training
43-5021	Couriers & Messengers	730	690	-40	140	11	Short-Term On-The-Job-Training
47-3012	Helpers--Carpenters	340	300	-40	110	11	Short-Term On-The-Job-Training
47-2152	Plumbers, Pipefitters, & Steamfitters	1,030	990	-40	110	9	Long-Term On-The-Job-Training
43-9071	Office Machine Operators, Except Computer	370	330	-40	90	11	Short-Term On-The-Job-Training
41-2022	Parts Salespersons	380	340	-40	80	10	Moderate-Term On-The-Job-Training
53-3031	Driver/Sales Workers	730	690	-40	70	11	Short-Term On-The-Job-Training
35-9011	Dining Rm & Cafeteria Attendant	1,250	1,220	-30	300	11	Short-Term On-The-Job-Training
47-2141	Painters, Construction & Maintenance	920	890	-30	110	10	Moderate-Term On-The-Job-Training
13-1022	Wholesale & Retail Buyers, Except Farm Products	650	630	-20	140	5	Bachelor's Degree
47-3015	Helpers--Pipelayyer, Plumber, Pipefitter & Steamfitters	270	250	-20	90	11	Short-Term On-The-Job-Training
41-3041	Travel Agents	560	540	-20	90	7	Post-Secondary Vocational Education
51-5023	Printing Machine Operators	410	390	-20	70	10	Moderate-Term On-The-Job-Training
11-9021	Construction Managers	630	610	-20	70	5	Bachelor's Degree
39-5012	Hairdressers, Hairstylists, & Cosmetologists	420	400	-20	70	7	Post-Secondary Vocational Education
47-2073	Operating Engineers & Oth Const Equipment Operators	410	390	-20	60	10	Moderate-Term On-The-Job-Training
47-2181	Roofers	410	390	-20	60	10	Moderate-Term On-The-Job-Training
51-5011	Bindery Workers	350	330	-20	60	10	Moderate-Term On-The-Job-Training
47-2044	Tile & Marble Setters	370	350	-20	40	9	Long-Term On-The-Job-Training
47-2081	Drywall & Ceiling Tile Installers	430	410	-20	30	10	Moderate-Term On-The-Job-Training
<b>TOTAL OF THESE OCCUPATIONS</b>		<b>55,850</b>	<b>51,930</b>	<b>-3,920</b>	<b>8,650</b>		

<sup>1</sup>Excludes All Other categories.

<sup>2</sup>March 2001 Benchmark.



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## **Appendix**



# **Standard Industrial Classification**

The Standard Industrial Classification (SIC) is a nationally standardized system for identifying and coding business establishments according to their industrial activity. An "establishment" is an economic unit, generally located at a single physical location, where business is conducted or where services or industrial operations are performed. The Standard Industrial Classification (SIC) Manual is the reference guide used to accurately apply and/or understand the classification coding system.

The SIC Manual's format separates industries into ten broad divisions, such as manufacturing and retail trade. Within those broad groupings are more specific two-digit codes, as well as more detailed three-digit and four-digit codes, that identify specific industries. Brief narratives describe the kinds of establishments contained in each classification category.

## **Suggestions for Users**

The SIC Manual facilitates the collection, analysis and publication of information about business establishments. This standardized system is used throughout the United States to promote uniformity in the publications of private and governmental agencies. The Employment Development Department's field office personnel use the manual to assign SIC codes to employers to aid in providing services. Trade associations and private industry use the manual in reference books, such as the California Manufacturers Register.

The manual can help one to understand the composite industries summarized in publications. However, all public sector workers are usually grouped together into a category called "government", which includes federal, state and local government, and state and local education.

The U.S. Department of Labor, Occupational Safety and Health Administration provides SIC information on the Internet at:

**[www.osha.gov](http://www.osha.gov)**

The SIC Manual may be purchased from U.S. Government Bookstores, Bureau of Labor Statistics, or the Superintendent of Documents in Los Angeles or San Francisco. For information about purchasing this manual, contact:

U.S. Government Bookstore  
Marathon Plaza, Room 141-S  
303 2nd Street  
San Francisco, CA 94107  
Phone – (415) 512-2770  
Fax – (415) 512-2776  
<http://access.gpo.go>

# Standard Occupational Classification (SOC)

The Standard Occupational Classification (SOC) 1998 System was developed in response to a growing need for a universal occupational classification system—a system which would allow government agencies and private industry to produce comparable data. The SOC system was designed to cover all occupations in which work is performed for pay or profit and will be used by all federal agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data.

Data collected by the 2000 Census of Population will be coded to the 1998 SOC; the Department of Labor's Occupational Information Network (O\*NET), adheres to the 1998 SOC. In fact, all federal government agencies that collect occupational data are expected to adopt the 1998 SOC over the next few years.

## General Characteristics of the Revised SOC

This system classifies workers at four levels of aggregation:

- major group
- minor group
- broad occupation
- detailed occupation

All workers are classified into one of over 820 occupations, according to their occupational definition. To facilitate classification, all occupations are clustered into one of 23 major groups. Within these major groups, there are 96 minor groups, and 449 broad occupations. Each broad occupation includes detailed occupation(s) requiring similar job duties, skills, education, or experience.

The following example shows the hierarchical structure of the 1998 SOC:

19-0000 Life, physical, and social science occupations (*major group*)

19-000 Life scientists (*minor group*)

19-1020 Biological scientists  
(*broad occupation*)

19-1021 Biochemists and biophysicists  
(*detailed occupation*)

19-1022 Microbiologists  
(*detailed occupation*)

19-1023 Zoologists and wildlife biologists  
(*detailed occupation*)

19-1029 Biological scientists, all other  
(*detailed occupation*)

Additional information, updated revision plans, and information on the implementation of the 1998 SOC are available at the Bureau of Labor Statistics (BLS) Internet site:

[www.bls.gov/soc/socguide.htm](http://www.bls.gov/soc/socguide.htm)

# North American Industry Classification System (NAICS)

The United States has a new industry classification system. The North American Industry Classification System (NAICS) will soon replace the U.S. Standard Industrial Classification (SIC) system.

The first-ever North American Industry classification system, NAICS was developed by the U.S., Canada and Mexico to provide comparable statistics across countries. For the first time, government and business analysts will be able to directly compare industrial production statistics collected and published in the North American Free Trade Agreement countries.

NAICS will reshape the way we view our changing economy. It is a unique, all-new system for classifying business establishments. It is the first economic classification system to be constructed based on a single economic concept. Economic units that use like processes to produce goods or services are grouped together. This "production-oriented" system means that statistical agencies in the United States will produce data that can be used for:

- measuring productivity, unit labor costs, and the capital intensity of production;
- constructing input-output relationships and;
- estimating employment-output relationships and other such statistics that require that inputs and outputs be used together.

NAICS responds to increasing and serious criticism about the SIC. NAICS reflects the structure of today's economy in the United States, Canada and Mexico, including the emergence and growth of the service sector and new and advanced technologies. It is a flexible system that allows each country to recognize important industries below the level at which comparable data will be shown for all three countries.

## NAICS-based statistics.

Advance statistics will appear in early 1999. A report in 2000 will show relationships between NAICS and SIC industries. Implementation by Federal agencies will be in phases. Some agency programs will convert to NAICS as early as 1999, others as late as 2004.

## How is NAICS better?

NAICS will make economic statistics more useful. It will improve basic benchmark and current performance statistics, like manufacturers' shipments, retail sales, and service receipts. It will improve statistics by providing an all-new industry classification system that is more:

*Relevant.* NAICS identifies new industries, revises concepts, and reorganizes classifications so that industry-classified statistics highlight businesses that contribute most to our economy.

*Consistent.* NAICS classifies businesses into industries based on one principle instead of several; the principle that businesses using similar production processes are classified together.

*Comparable.* NAICS provides the first-ever comparability in North American industry classifications and economic statistics.

*Flexible.* NAICS classifications will be updated regularly to keep pace with changes in our economy; every 5 years, all three North American countries will review NAICS and make needed revisions.

## How NAICS will affect the data you use.

Every sector of the economy has been restructured and redefined:

- A new *Information* sector combines communications, publishing, motion picture and sound recording, and online services, recognizing our information-based economy.
- *Manufacturing* is restructured to incorporate high-tech industries, with a new subsector devoted to computers and electronics.
- *Retail Trade* is redefined. In addition, eating and drinking places are transferred to the new *Accommodation and Food Services* sector.
- The difference between Retail and Wholesale is now based on how each store conducts business.

For example, many computer stores are reclassified from wholesale to retail.

- Nine new service sectors and 250 new service industries are recognized.

#### **All new numbering system**

Numeric codes for each NAICS classification are completely different from those of the SIC. The new numbering system underscores the “clean slate” approach taken in NAICS and allows its classification changes to be fully developed.

The new system provides five levels of classification (up from four in the SIC), detailed codes that have a maximum of six-digits (up from four in the SIC) and detailed classifications called “U.S. Industry” (instead of “Industry” in the SIC). These changes require new numbers, even for industries that continue without change.

For example, both NAICS and SIC include the detailed industry, “Passenger car rental.” However, in NAICS, it has code number 532111, and in the SIC, it was code number 7514. While all NAICS numeric codes are new, like the SIC, they are organized into multi-level hierarchical classification groups that build up from the detailed industry level.

The additional level of classification and expanded number of digits permit NAICS to account for the increased number of classifications, provide flexibility in structuring industry classification groups, and allow for country-based variations in classification detail.

A variety of resources are available to help users of business statistics understand and use NAICS. Additional information, answers to frequently asked questions, and updated agency implementation plans are available at the Census Bureau's Internet site:

**[www.census.gov/naics](http://www.census.gov/naics)**

Answers to classification and data program inquiries may also be addressed to industry experts at:

**Phone: 1-888-75NAICS**

**Email: [naics@census.gov](mailto:naics@census.gov)**

# Projection Methods and Economic Assumptions

The employment projection process consists of two phases: first, projections for employment by industry are made using both historical data and current information about the economy. Next, the industry projections become a primary source used to project changes in occupational employment.

Changes in occupational employment over time result from two principal sources: industry growth and technological change. In developing occupational employment projections, both of these components must be addressed.

The following is a discussion of how industry and occupational projections are developed, beginning with a description of data sources and followed by a description of the steps involved.

## Principal Data Sources

*Employment by Industry* The source of the official historical industry employment series used for industry projections for the state and each county is the Current Employment Statistics (CES) program. This is a Federal/State cooperative program that compiles monthly estimates of industry employment groupings for the state and each county. These monthly industry employment estimates are based primarily on employer sample surveys.

A second source used in industry forecasts is the Covered Employment and Wage Data, or ES-202 program. Essentially, this program extracts employment and wage information from quarterly tax returns filed by each California employer covered by unemployment insurance. Each employer has been assigned a specific industry and county code and these data are compiled to provide the 'actual' industry employment levels for each industry and county. These data are then used for benchmarking the monthly industry employment estimates made in the CES program. This is also a Federal/State cooperative program.

*Employment by Occupation* Occupational employment estimates are based on survey data collected through the Occupational Employment Statistics (OES) program. The OES survey is an annual mail survey of nonfarm employers conducted by EDD in cooperation with the U.S. Bureau of Labor

Statistics. The survey is based on a sample designed to represent the universe of employers in each state. In California, data are collected for over 800 occupations at the three-digit SIC level of detail. The survey samples approximately 110,000 business establishments over a three year period.

## The Process

*Industry Projections* Industry projections are first developed at aggregated levels (industry groupings) for the state and each county based on the Current Employment Statistics employment series.

Second, these aggregated industry projections are then broken down into more industry specific detail using the ES-202 data. The industry specific projections then become the primary source from which occupational projections are developed by using industry staffing patterns data. The following steps outline the process:

- Approximately every two years, industry employment projections are produced for the nation by the Bureau of Labor Statistics.
- Industry projections are then developed for the state using input from the national forecast and the historical industry employment series for the state.
- County industry projections are then developed using input from the state forecast and the historical employment series for each county.
- State projections are developed for ten years from the base period and county projections are developed for seven years from the base period.
- State forecasts are reviewed by LMID industry analysts, California's Department of Finance, and academics.
- County forecasts are reviewed by local area consultants who provide up-to-date information regarding recent developments in each county not normally accounted for in the model.

**Occupational Projections** The distribution of industry employment by occupation is performed in three steps.

- OES survey responses are summarized by industry and matched with appropriate SIC in the area. (In cases where local OES responses are not available, statewide responses or another area's responses are substituted.)
- The survey data are adjusted to total to the annual average employment level for each industry. This results in estimates of employment by occupation within the three-digit SICs for the base year.
- Finally, base year staffing patterns are adjusted to account for projected shifts in occupational distributions due to technological changes.

These projected changes are derived from special studies conducted by the U.S. Bureau of Labor Statistics. Applying these changes to the base year staffing patterns results in staffing patterns by three-digit SIC for the projected year. Projected year staffing patterns are applied to the industry employment projections to produce occupational employment projections within three-digit SICs. Data by occupation are then summed to get the occupational estimates. The difference between the base year occupation estimates and the projected year projections represents the job growth resulting from industry growth and from technological change. (Change factors do not try to predict regulatory changes.)

Demand for workers is also created by openings that result when workers leave jobs to enter other occupations, retire, or leave the labor force for other reasons. These openings, termed *separations*, are important because, in most occupations, they exceed job openings resulting from employment growth. Even occupations that are projected to decline usually provide job openings due to separations. Separations are developed from separation rates compiled on a national basis every two years by the Bureau Of Labor Statistics.

### Economic Assumptions

The industry and occupational projections in this report are based on the following assumptions:

- The institutional framework of the U.S. economy will not change radically.
- Recent technological and scientific trends will continue.
- The long-term employment patterns will continue in most industries.
- Federal, state, and local government agencies will continue to operate under budgetary constraints.
- No major events, such as war, will occur that will significantly alter the industrial structure of the economy, the occupational staffing patterns, or the rate of long-term growth.
- Population growth rates and age distributions will not differ significantly from Department of Finance projections presently available.
- Attitudes toward work, education, income, and leisure will not change significantly.

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Accountants & Auditors	56	13-2011
Actors	283	27-2011
Actuaries	82	15-2011
Admin Law Judges, Adjudicators, & Hearing Officers	194	23-1021
Administrative Services Managers	11	11-3011
Adult Literacy, Remedial Ed, & GED Teachers &	252	25-3011
Advertising & Promotions Managers	7	11-2011
Advertising Sales Agents	485	41-3011
Aerospace Engineering & Operations Technicians	117	17-3021
Aerospace Engineers	95	17-2011
Agents & Bus Mgrs of Artists, Performers & Athletes	39	13-1011
Agricultural & Food Science Technicians	163	19-4011
Agricultural & Food Scientists, All Other	131	19-1019
Agricultural Engineers	96	17-2021
Agricultural Equipment Operators	564	45-2091
Agricultural Inspectors	561	45-2011
Agricultural Sciences Teachers, Postsecondary	209	25-1041
Agricultural Workers, All Other	568	45-2099
Air Crew Members	873	55-3011
Air Crew Officers	862	55-1011
Air Traffic Controllers	813	53-2021
Air Transportation Workers, All Other	815	53-2099
Aircraft Cargo Handling Supervisors	808	53-1011
Aircraft Launch & Recovery Officers	863	55-1012
Aircraft Launch & Recovery Specialists	874	55-3012
Aircraft Mechanics & Service Technicians	654	49-3011
Aircraft Struct, Surfaces, Rigging, & Systems Assemb	696	51-2011
Airfield Operations Specialists	814	53-2022
Airline Pilots, Copilots, & Flight Engineers	811	53-2011
Ambulance Drivers & Attendants, Ex EMTs	816	53-3011
Amusement & Recreation Attendants	451	39-3091
Anesthesiologists	323	29-1061
Animal Breeders	562	45-2021
Animal Control Workers	402	33-9011
Animal Scientists	128	19-1011
Animal Trainers	444	39-2011
Announcers, All Other	295	27-3019
Anthropologists & Archeologists	158	19-3091
Anthropology & Archeology Teachers, Postsecond	216	25-1061
Appraisers & Assessors of Real Estate	57	13-2021
Arbitrators, Mediators, & Conciliators	195	23-1022
Architects, Except Landscape & Naval	90	17-1011
Architects, Surveyors, & Cartographers, All Other	94	17-1099
Architectural & Civil Drafters	113	17-3011
Architecture & Engineering Occupations	89	17-0000
Architecture Teachers, Postsecondary	207	25-1031
Archivists, Curators, & Museum Technicians	256	25-4011
Archivists, Curators, & Museum Techs, All Other	259	25-4019
Area, Ethnic, & Cultral Studies Teachrs, Postsecond	217	25-1062
Armored Assault Vehicle Crew Members	875	55-3013

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Armored Assault Vehicle Officers	864	55-1013
Art & Design Workers, All Other	282	27-1099
Art Directors	269	27-1011
Art, Drama, & Music Teachers, Postsecondary	231	25-1121
Artillery & Missile Crew Members	876	55-3014
Artillery & Missile Officers	865	55-1014
Artists & Related Workers, All Other	273	27-1019
Arts, Design, Entertainment, Sports, & Media Occs	268	27-0000
Assemblers & Fabricators, All Other	705	51-2099
Astronomers	141	19-2011
Athletes & Sports Competitors	285	27-2021
Athletic Trainers	366	29-9091
Atmos, Earth, Marine, & Space Sciences Teachrs	212	25-1051
Atmospheric & Space Scientists	143	19-2021
Audio & Video Equipment Technicians	305	27-4011
Audiologists	334	29-1121
Audio-Visual Collections Specialists	262	25-9011
Automotive Body & Related Repairers	655	49-3021
Automotive Glass Installers & Repairers	656	49-3022
Automotive Service Technicians & Mechanics	657	49-3023
Avionics Technicians	645	49-2091
Baggage Porters & Bellhops	464	39-6011
Bailiffs	395	33-3011
Bakers	706	51-3011
Barbers	458	39-5011
Bartenders	419	35-3011
Bicycle Repairers	665	49-3091
Bill & Account Collectors	505	43-3011
Billing & Posting Clerks & Machine Operators	506	43-3021
Bindery Workers	740	51-5011
Biochemists & Biophysicists	132	19-1021
Biological Science Teachers, Postsecondary	210	25-1042
Biological Scientists, All Other	135	19-1029
Biological Technicians	164	19-4021
Biomedical Engineers	97	17-2031
Bldng & Grounds Cleaning & Maint Wrkers, All Other	439	37-9099
Boilermakers	579	47-2011
Bookbinders	741	51-5012
Bookkeeping, Accounting, & Auditing Clerks	507	43-3031
Brickmasons & Blockmasons	580	47-2021
Bridge & Lock Tenders	836	53-6011
Broadcast News Analysts	296	27-3021
Broadcast Technicians	306	27-4012
Brokerage Clerks	512	43-4011
Budget Analysts	58	13-2031
Building & Grounds Cleaning & Maintenance Occs	428	37-0000
Building Cleaning Workers, All Other	433	37-2019
Bus & Truck Mechs & Diesel Engine Specialists	658	49-3031
Bus Drivers, School	818	53-3022
Bus Drivers, Transit & Intercity	817	53-3021

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Business & Financial Operations Occupations	38	13-0000
Business Operations Specialists, All Other	55	13-1199
Business Teachers, Postsecondary	204	25-1011
Butchers & Meat Cutters	707	51-3021
Cabinetmakers & Bench Carpenters	761	51-7011
Camera & Photographic Equipment Repairers	680	49-9061
Camera Ops, Television, Video, & Motion Picture	310	27-4031
Captains, Mates, & Pilots of Water Vessels	832	53-5021
Cardiovascular Technologists & Technicians	347	29-2031
Cargo & Freight Agents	530	43-5011
Carpenters	582	47-2031
Carpet Installers	583	47-2041
Cartographers & Photogrammetrists	92	17-1021
Cashiers	480	41-2011
Cement Masons & Concrete Finishers	587	47-2051
Cementing & Gluing Machine Operators & Tenders	798	51-9191
Chefs & Head Cooks	410	35-1011
Chemical Engineers	98	17-2041
Chemical Equipment Operators & Tenders	777	51-9011
Chemical Plant & System Operators	773	51-8091
Chemical Technicians	165	19-4031
Chemistry Teachers, Postsecondary	213	25-1052
Chemists	144	19-2031
Chief Executives	4	11-1011
Child Care Workers	470	39-9011
Child, Family, & School Social Workers	180	21-1021
Chiropractors	314	29-1011
Choreographers	289	27-2032
Civil Engineering Technicians	118	17-3022
Civil Engineers	99	17-2051
Claims Adjusters, Examiners, & Investigators	43	13-1031
Clean, Wash, & Metal Pickling Equip Ops & Tenders	799	51-9192
Cleaners of Vehicles & Equipment	849	53-7061
Clergy	188	21-2011
Clinical, Counseling, & School Psychologists	153	19-3031
Coaches & Scouts	286	27-2022
Coat, Paint, & Spray Mach Set, Opes & Tenders	792	51-9121
Coil Winders, Tapers, & Finishers	697	51-2021
Coin, Vend, & Amusement Mach Servicers & Repair	685	49-9091
Comb Food Prep & Serving Wrkers, Incl Fast Food	420	35-3021
Comm& & Control Center Officers	866	55-1015
Command & Control Center Specialists	877	55-3015
Commercial & Industrial Designers	274	27-1021
Commercial Divers	686	49-9092
Commercial Pilots	812	53-2012
Communications Equipment Operators, All Other	504	43-2099
Communications Teachers, Postsecondary	232	25-1122
Community & Social Service Specialists, All Other	187	21-1099
Community & Social Services Occupations	173	21-0000
Comp Officers, Ex Ag, Const, Hlth & Safety, & Trans	45	13-1041

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Comp-Controlled Mach Tool Ops, Metal & Plastic	714	51-4011
Compensation & Benefits Managers	14	11-3041
Compensation, Benefits, & Job Analysis Specialists	49	13-1072
Computer & Information Scientists, Research	72	15-1011
Computer & Information Systems Managers	12	11-3021
Computer & Mathematical Science Occupations	71	15-0000
Computer Hardware Engineers	100	17-2061
Computer Operators	546	43-9011
Computer Programmers	73	15-1021
Computer Science Teachers, Postsecondary	205	25-1021
Computer Software Engineers, Applications	74	15-1031
Computer Software Engineers, Systems Software	75	15-1032
Computer Specialists, All Other	81	15-1099
Computer Support Specialists	76	15-1041
Computer Systems Analysts	77	15-1051
Computer, Automated Teller, & Office Mach Repairer	642	49-2011
Concierges	465	39-6012
Conservation Scientists	136	19-1031
Construction & Building Inspectors	616	47-4011
Construction & Extraction Occupations	577	47-0000
Construction & Extraction Occupations, All Other	639	47-9999
Construction & Related Workers, All Other	624	47-4099
Construction Laborers	589	47-2061
Construction Managers	22	11-9021
Construction Trades & Related Workers, All Other	625	47-4999
Continuous Mining Machine Operators	631	47-5041
Control & Valve Installers & Repairers, Ex Mech	670	49-9012
Conveyor Operators & Tenders	842	53-7011
Cooks, All Other	417	35-2019
Cooks, Fast Food	412	35-2011
Cooks, Institution & Cafeteria	413	35-2012
Cooks, Private Household	414	35-2013
Cooks, Restaurant	415	35-2014
Cooks, Short Order	416	35-2015
Cooling & Freezing Equipment Operators & Tenders	800	51-9193
Correctional Officers & Jailers	396	33-3012
Correspondence Clerks	513	43-4021
Cost Estimators	46	13-1051
Costume Attendants	452	39-3092
Counselors, All Other	179	21-1019
Counselors, Social & Religious Workers, All Other	191	21-9099
Counter & Rental Clerks	482	41-2021
Counter Attends, Cafe, Food Concess, & Coffee Shop	421	35-3022
Couriers & Messengers	531	43-5021
Court Reporters	198	23-2091
Court, Municipal, & License Clerks	514	43-4031
Craft Artists	270	27-1012
Crane & Tower Operators	843	53-7021
Credit Analysts	59	13-2041
Credit Authorizers, Checkers, & Clerks	515	43-4041

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Criminal Justice & Law Enforce Teachrs, Postsecond	228	25-1111
Crossing Guards	406	33-9091
Crushing, Grinding, & Polishing Mach Setters, Ops	779	51-9021
Curators	257	25-4012
Customer Service Representatives	516	43-4051
Cutters & Trimmers, Hand	782	51-9031
Cutting & Slicing Mach Setters, Ops, & Tenders	783	51-9032
Cutting, Punching, & Press Machine Setters, Ops	719	51-4031
Dancers	288	27-2031
Data Entry Keyers	547	43-9021
Database Administrators	78	15-1061
Demonstrators & Product Promoters	492	41-9011
Dental Assistants	380	31-9091
Dental Hygienists	346	29-2021
Dental Laboratory Technicians	788	51-9081
Dentists, All Other Specialists	319	29-1029
Dentists, General	315	29-1021
Derrick Operators, Oil & Gas	626	47-5011
Designers, All Other	281	27-1029
Desktop Publishers	549	43-9031
Detectives & Criminal Investigators	397	33-3021
Diagnostic Medical Sonographers	348	29-2032
Dietetic Technicians	352	29-2051
Dietitians & Nutritionists	320	29-1031
Dining Rm & Cafeteria Attendants & Bartender Help	424	35-9011
Directors, Religious Activities & Education	189	21-2021
Dishwashers	425	35-9021
Dispatchers, Except Police, Fire, & Ambulance	533	43-5032
Drafters, All Other	116	17-3019
Drafters, Engineering, & Map Technicians, All Other	126	17-3099
Dredge Operators	844	53-7031
Drill & Bore Mach Tool Set, Ops, & Tend, Metal & Plasti	720	51-4032
Driver/Sales Workers	819	53-3031
Dr-to-Dr Sales Wrkrs, Nws & St Vndrs, & Rel Wrkrs	498	41-9091
Drywall & Ceiling Tile Installers	593	47-2081
Earth Drillers, Except Oil & Gas	629	47-5021
Economics Teachers, Postsecondary	218	25-1063
Economists	150	19-3011
Editors	300	27-3041
Educ Admins, Elementary & Secondary School	24	11-9032
Educ Admins, Preschool & Child Care Center	23	11-9031
Education Administrators, All Other	26	11-9039
Education Administrators, Postsecondary	25	11-9033
Education Teachers, Postsecondary	226	25-1081
Education, Training, & Library Occupations	203	25-0000
Education, Training, & Library Workers, All Other	266	25-9099
Educational, Vocational, & School Counselors	175	21-1012
Electric Motor, Power Tool, & Related Repairers	646	49-2092
Electrical & Electronic Engineering Technicians	119	17-3023
Electrical & Electronic Equipment Assemblers	698	51-2022

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Electrical & Electronic Equip Mechs, Install, & Repair	653	49-2099
Electrical & Electronics Drafters	114	17-3012
Electrical & Electronics Install & Repair, Trans Equipt	647	49-2093
Electrical & Electronics Repair, Comm & Indust Equipt	648	49-2094
Electrical & Electronics Repair, Powerhse, Substrn, & Re	649	49-2095
Electrical Engineers	101	17-2071
Electrical Power-Line Installers & Repairers	678	49-9051
Electricians	595	47-2111
Electromechanical Equipment Assemblers	699	51-2023
Electro-Mechanical Technicians	120	17-3024
Electronic Equipt Install & Repair, Motor Veh	650	49-2096
Electronic Home Entertainment Equipt Install & Repair	651	49-2097
Electronics Engineers, Except Computer	102	17-2072
Elementary School Teachers, Except Special Ed	244	25-2021
Elevator Installers & Repairers	617	47-4021
Eligibility Interviewers, Government Programs	517	43-4061
Embalmers	456	39-4011
Emergency Management Specialists	47	13-1061
Emergency Medical Technicians & Paramedics	351	29-2041
Employment, Recruitment, & Placement Specialists	48	13-1071
Engine & Other Machine Assemblers	700	51-2031
Engineering Managers	27	11-9041
Engineering Teachers, Postsecondary	208	25-1032
Engineering Technicians, Except Drafters, All Other	124	17-3029
Engineers, All Other	112	17-2199
English Lang & Literature Teachers, Postsecond	233	25-1123
Entertainers & Performers, Sports & Rel Workers	292	27-2099
Entertainment Attendants & Rel Workers, All Other	454	39-3099
Environ Science & Protection Techs, Incl Health	169	19-4091
Environmental Engineering Technicians	121	17-3025
Environmental Engineers	103	17-2081
Environmental Science Teachers, Postsecondary	214	25-1053
Environmental Scientists & Specialists, Incl Health	146	19-2041
Epidemiologists	138	19-1041
Etchers & Engravers	801	51-9194
Excavating & Loading Machine & Dragline Operators	845	53-7032
Executive Secretaries & Administrative Assistants	542	43-6011
Explosive Wrkers, Ordnce Handling Experts, & Blasters	630	47-5031
Extraction Workers, All Other	638	47-5099
Extrud & Draw Mach Setters, Ops, & Tends, Metl & Plas	716	51-4021
Extrude & Form Mach Setters, Ops, & Tenders	757	51-6091
Extrude, Form, Press, & Compact Mach Set, Ops, & Tend	784	51-9041
Fabric & Apparel Patternmakers	758	51-6092
Fabric Menders, Except Garment	687	49-9093
Fallers	572	45-4021
Family & General Practitioners	324	29-1062
Farm & Home Management Advisors	263	25-9021
Farm Equipment Mechanics	659	49-3041
Farm Labor Contractors	560	45-1012
Farm, Ranch, & Other Agricultural Managers	20	11-9011

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Farmers & Ranchers	21	11-9012
Farming, Fishing, & Forestry Occupations	558	45-0000
Farming, Fishing, & Forestry Workers, All Other	576	45-9099
Farmworkers, Agricultural Production	567	45-2094
Farmworkers, Farm & Ranch Animals	566	45-2093
Farmwrkrs & Labor, Crop, Nursery, & Greenhouse	565	45-2092
Fashion Designers	275	27-1022
Fence Erectors	618	47-4031
Fiberglass Laminators & Fabricators	702	51-2091
File Clerks	518	43-4071
Film & Video Editors	311	27-4032
Financial Analysts	60	13-2051
Financial Examiners	63	13-2061
Financial Managers	13	11-3031
Financial Specialists, All Other	68	13-2099
Financial, Information, & Record Clerks, All Other	529	43-4999
Fine Artists, Incl Painters, Sculptors, & Illustrators	271	27-1013
Fire Fighters	392	33-2011
Fire Inspectors & Investigators	393	33-2021
First-Line Supervisors/Managers of Air Crew Members	870	55-2011
First-Line Supervisors/Managers of All Other Tactical O	872	55-2013
First-Line Supervisors/Managers of Weapons Specialists	871	55-2012
First-Line Sups/Managers of Correctional Officers	388	33-1011
First-Line Sups/Managers of Police & Detectives	389	33-1012
First-Line Sups/Mgrs of Construction Trades	578	47-1011
First-Line Sups/Mgrs of Farm, Fish, & Forest Wrkrs	559	45-1011
First-Line Sups/Mgrs of Fire Fighting & Prevent Wrkrs	390	33-1021
First-Line Sups/Mgrs of Food Prep & Serving Wrkrs	411	35-1012
First-Line Sups/Mgrs of Help, Labor, & Mat Move, Hand	809	53-1021
First-Line Sups/Mgrs of Housekeep & Janitor Wrkrs	429	37-1011
First-Line Sups/Mgrs of Lndscp, Lwn Serv, & Grndskeep W	430	37-1012
First-Line Sups/Mgrs of Mechanics, Installer	641	49-1011
First-Line Sups/Mgrs of Non-Retail Sales Workers	479	41-1012
First-Line Sups/Mgrs of Office & Admin Support Wrkrs	501	43-1011
First-Line Sups/Mgrs of Personal Service Workers	443	39-1021
First-Line Sups/Mgrs of Prod & Operating Wrkrs	695	51-1011
First-Line Sups/Mgrs of Retail Sales Workers	478	41-1011
First-Line Sups/Mgrs of Trans & Mat-Moving Mach & Veh O	810	53-1031
First-Line Sups/Mgrs, Protective Serv Wrkrs, All Other	391	33-1099
Fish & Game Wardens	398	33-3031
Fishers & Related Fishing Workers	569	45-3011
Fitness Trainers & Aerobics Instructors	472	39-9031
Flight Attendants	468	39-6031
Floor Layers, Except Carpet, Wood, & Hard Tiles	584	47-2042
Floor Sanders & Finishers	585	47-2043
Floral Designers	276	27-1023
Food & Tobac Roast, Bake, & Dry Mach Ops & Tends	710	51-3091
Food Batchmakers	711	51-3092
Food Cooking Machine Operators & Tenders	712	51-3093
Food Prep & Serving Related Workers, All Other	427	35-9099

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Food Preparation & Serving Related Occupations	409	35-0000
Food Preparation Workers	418	35-2021
Food Processing Workers, All Other	713	51-3099
Food Scientists & Technologists	129	19-1012
Food Servers, Nonrestaurant	423	35-3041
Food Service Managers	28	11-9051
Foreign Language & Lit Teachrs, Postsecond	234	25-1124
Forensic Science Technicians	170	19-4092
Forest & Conservation Science Teachrs, Postsecond	211	25-1043
Forest & Conservation Technicians	171	19-4093
Forest & Conservation Workers	571	45-4011
Forest Fire Inspectors & Prevention Specialists	394	33-2022
Foresters	137	19-1032
Forging Mach Setters, Ops, & Tends, Metal & Plastic	717	51-4022
Foundry Mold & Coremakers	729	51-4071
Funeral Attendants	457	39-4021
Funeral Directors	29	11-9061
Furnace, Kiln, Oven, Drier, & Kettle Ops & Tenders	785	51-9051
Furniture Finishers	762	51-7021
Gaming & Sports Book Writers & Runners	447	39-3012
Gaming Cage Workers	508	43-3041
Gaming Change Persons & Booth Cashiers	481	41-2012
Gaming Dealers	446	39-3011
Gaming Managers	30	11-9071
Gaming Service Workers, All Other	448	39-3019
Gaming Supervisors	441	39-1011
Gaming Surveillance Officers & Gaming Investigators	404	33-9031
Gaming Workers, All Other	455	39-3199
Gas Compressor & Gas Pumping Station Operators	853	53-7071
Gas Plant Operators	774	51-8092
General & Operations Managers	5	11-1021
Geographers	159	19-3092
Geography Teachers, Postsecondary	219	25-1064
Geological & Petroleum Technicians	166	19-4041
Geoscientists, Except Hydrologists & Geographers	147	19-2042
Glaziers	596	47-2121
Graders & Sorters, Agricultural Products	563	45-2041
Graduate Teaching Assistants	237	25-1191
Graphic Designers	277	27-1024
Grind, Lap, Polish, & Buff Mach Tool Set, Ops, & Tend,	721	51-4033
Grinding & Polishing Workers, Hand	780	51-9022
Grounds Maintenance Workers, All Other	438	37-3019
Hairdressers, Hairstylists, & Cosmetologists	459	39-5012
Hazardous Materials Removal Workers	619	47-4041
Health & Safety Engrs, Ex Mining Safety Engrs & Insp	104	17-2111
Health Diagnosing & Treating Practitioners, All Other	343	29-1199
Health Educators	184	21-1091
Health Professionals & Technicians, All Other	368	29-9199
Health Specialties Teachers, Postsecondary	224	25-1071
Health Technologists & Technicians, All Other	362	29-2099

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Healthcare Practitioners & Tech Workers, All Other	367	29-9099
Healthcare Practitioners & Technical Occupations	313	29-0000
Healthcare Support Occupations	371	31-0000
Healthcare Support Workers, All Other	386	31-9099
Heat Treat Equipt Set, Ops, & Tend, Metal & Plastic	735	51-4191
Heating, Air Conditioning, & Refrigeration Mechanics	671	49-9021
Helpers, Construction Trades, All Other	615	47-3019
Helpers--Brick, Block, Stonemasons, & Tile & Marble Set	609	47-3011
Helpers--Carpenters	610	47-3012
Helpers--Electricians	611	47-3013
Helpers--Extraction Workers	637	47-5081
Helpers--Installation, Maint, & Repair Workers	692	49-9098
Helpers--Paint, Paperhanger, Plaster, & Stucco	612	47-3014
Helpers--Pipelayer, Plumber, Pipefitter, & Steamfitter	613	47-3015
Helpers--Production Workers	805	51-9198
Helpers--Roofers	614	47-3016
Highway Maintenance Workers	620	47-4051
Historians	160	19-3093
History Teachers, Postsecondary	235	25-1125
Hoist & Winch Operators	847	53-7041
Home Appliance Repairers	672	49-9031
Home Economics Teachers, Postsecondary	238	25-1192
Home Health Aides	372	31-1011
Hosts & Hostess, Restaurant, Lounge, & Coffee Shp	426	35-9031
Hotel, Motel, & Resort Desk Clerks	519	43-4081
Human Resources Assist, Ex Pay & Timekeep	525	43-4161
Human Resources Managers, All Other	16	11-3049
Human Resrces, Trng, & Lab Rels Specs, All Other	51	13-1079
Hunters & Trappers	570	45-3021
Hydrologists	148	19-2043
Industrial Engineering Technicians	122	17-3026
Industrial Engineers	105	17-2112
Industrial Machinery Mechanics	673	49-9041
Industrial Production Managers	17	11-3051
Industrial Truck & Tractor Operators	848	53-7051
Industrial-Organizational Psychologists	154	19-3032
Infantry	878	55-3016
Infantry Officers	867	55-1016
Information & Record Clerks, All Other	528	43-4199
Inspectors, Testers, Sorters, Samplers, & Weighers	786	51-9061
Installation, Maint, & Repair Workers, All Other	693	49-9099
Installation, Maintenance, & Repair Occupations	640	49-0000
Instructional Coordinators	264	25-9031
Insulation Workers, All Other	599	47-2139
Insulation Workers, Floor, Ceiling, & Wall	597	47-2131
Insulation Workers, Mechanical	598	47-2132
Insurance Appraisers, Auto Damage	44	13-1032
Insurance Claims & Policy Processing Clerks	550	43-9041
Insurance Sales Agents	486	41-3021
Insurance Underwriters	62	13-2053

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Interior Designers	278	27-1025
Internists, General	325	29-1063
Interpreters & Translators	303	27-3091
Interviewers, Except Eligibility & Loan	520	43-4111
Janitors & Clean, Ex Maids & Housekeep Cleaners	431	37-2011
Jewelers & Precious Stone & Metal Workers	787	51-9071
Job Printers	742	51-5021
Judges, Magistrate Judges, & Magistrates	196	23-1023
Kindergarten Teachers, Except Special Education	243	25-2012
Laborers & Freight, Stock, & Material Movers, Hand	850	53-7062
Landscape Architects	91	17-1012
Landscaping & Groundskeeping Workers	435	37-3011
Lathe & Turn Mach Tool Set, Ops, & Tend, Metl & Plas	722	51-4034
Laundry & Dry-Cleaning Workers	746	51-6011
Law Clerks	199	23-2092
Law Teachers, Postsecondary	229	25-1112
Lawyers	193	23-1011
Lay-Out Workers, Metal & Plastic	736	51-4192
Legal & Related Workers, All Other	202	23-9099
Legal Occupations	192	23-0000
Legal Secretaries	543	43-6012
Legal Support Workers, All Other	201	23-2099
Legislators	6	11-1031
Librarians	260	25-4021
Library Assistants, Clerical	521	43-4121
Library Science Teachers, Postsecondary	227	25-1082
Library Technicians	261	25-4031
Library, Museum, Training, & Oth Ed Wrkrs, All Other	267	25-9199
Licensed Practical & Licensed Vocational Nurses	358	29-2061
Life Scientists, All Other	140	19-1099
Life, Physical, & Social Science Occupations	127	19-0000
Life, Physical, & Social Science Techs, All Other	172	19-4099
Lifeguards, Ski Patrol, & Oth Rec Protect Serv Wrkrs	407	33-9092
Loading Machine Operators, Underground Mining	846	53-7033
Loan Counselors	64	13-2071
Loan Interviewers & Clerks	522	43-4131
Loan Officers	65	13-2072
Locker Room, Coatroom, & Dressing Room Attend	453	39-3093
Locksmiths & Safe Repairers	688	49-9094
Locomotive Engineers	824	53-4011
Locomotive Firers	825	53-4012
Lodging Managers	31	11-9081
Log Graders & Scalers	574	45-4023
Logging Equipment Operators	573	45-4022
Logging Workers, All Other	575	45-4029
Logisticians	52	13-1081
Machine Feeders & Offbearers	851	53-7063
Machinists	724	51-4041
Maids & Housekeeping Cleaners	432	37-2012
Mail Clerks & Mail Mach Ops, Ex Postal Service	551	43-9051

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Maintenance & Repair Workers, General	674	49-9042
Maintenance Workers, Machinery	675	49-9043
Makeup Artists, Theatrical & Performance	460	39-5091
Management Analysts	53	13-1111
Management Occupations	3	11-0000
Management, Bus. & Financial Occs, All Other	69	11-13-9999
Management, Business, & Financial Occupations	2	11-13-0000
Managers, All Other	37	11-9199
Manicurists & Pedicurists	461	39-5092
Manufactured Building & Mobile Home Installers	689	49-9095
Marine Engineers & Naval Architects	106	17-2121
Market Research Analysts	151	19-3021
Marketing Managers	8	11-2021
Marriage & Family Therapists	176	21-1013
Massage Therapists	379	31-9011
Material Moving Workers, All Other	859	53-7199
Materials Engineers	107	17-2131
Materials Scientists	145	19-2032
Mathematical Science Occupations, All Other	87	15-2099
Mathematical Science Teachers, Postsecondary	206	25-1022
Mathematical Technicians	86	15-2091
Mathematicians	83	15-2021
Meat, Poultry, & Fish Cutters & Trimmers	708	51-3022
Mechanical Door Repairers	669	49-9011
Mechanical Drafters	115	17-3013
Mechanical Engineering Technicians	123	17-3027
Mechanical Engineers	108	17-2141
Media & Communication Equip. Workers, All Other	312	27-4099
Media & Communication Workers, All Other	304	27-3099
Medical & Clinical Laboratory Technicians	345	29-2012
Medical & Clinical Laboratory Technologists	344	29-2011
Medical & Health Services Managers	32	11-9111
Medical & Public Health Social Workers	181	21-1022
Medical Appliance Technicians	789	51-9082
Medical Assistants	381	31-9092
Medical Equipment Preparers	382	31-9093
Medical Equipment Repairers	681	49-9062
Medical Records & Health Information Technicians	359	29-2071
Medical Scientists, Except Epidemiologists	139	19-1042
Medical Secretaries	544	43-6013
Medical Transcriptionists	383	31-9094
Meeting & Convention Planners	54	13-1121
Mental Health & Substance Abuse Social Workers	182	21-1023
Mental Health Counselors	177	21-1014
Merchandise Displayers & Window Trimmers	279	27-1026
Metal Workers & Plastic Workers, All Other	739	51-4199
Metal-Refining Furnace Operators & Tenders	725	51-4051
Meter Readers, Utilities	534	43-5041
Microbiologists	133	19-1022
Mid School Teachers, Ex Special & Vocational Ed	245	25-2022

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Military Enlisted Tactical Operations & Air/Weapons Spe	881	55-3019
Military Officer Special & Tactical Operations Leader	869	55-1019
Military Specific Occupations	861	55-0000
Mill & Plan Mach Set, Ops, & Tend, Metal & Plastic	723	51-4035
Millwrights	676	49-9044
Mine Cutting & Channeling Machine Operators	632	47-5042
Mining & Geological Engrs, Incl Mining Safety Engrs	109	17-2151
Mining Machine Operators, All Other	633	47-5049
Mix & Blend Mach Setters, Ops, & Tenders	781	51-9023
Mobile Heavy Equipt Mechanics, Except Engines	660	49-3042
Model Makers, Metal & Plastic	727	51-4061
Model Makers, Wood	763	51-7031
Models	493	41-9012
Mold, Core, & Cast Mach, Set, Ops & Tend, Metl & Plas	730	51-4072
Molders, Shapers, & Casters, Except Metal & Plastic	802	51-9195
Motion Picture Projectionists	449	39-3021
Motor Vehicle Operators, All Other	823	53-3099
Motorboat Mechanics	662	49-3051
Motorboat Operators	833	53-5022
Motorcycle Mechanics	663	49-3052
Mult MachTool Set, Ops, & Tend,Metal & Plastic	731	51-4081
Multi-Media Artists & Animators	272	27-1014
Museum Technicians & Conservators	258	25-4013
Music Directors & Composers	290	27-2041
Musical Instrument Repairers & Tuners	682	49-9063
Musicians & Singers	291	27-2042
Natural Sciences Managers	33	11-9121
Network & Computer Systems Administrators	79	15-1071
Network Systems & Data Communications Analysts	80	15-1081
New Accounts Clerks	523	43-4141
News Analysts, Reporters & Corres, All Other	298	27-3029
Nonfarm Animal Caretakers	445	39-2021
Nuclear Engineers	110	17-2161
Nuclear Medicine Technologists	349	29-2033
Nuclear Power Reactor Operators	768	51-8011
Nuclear Technicians	167	19-4051
Numerical Tool & Process Control Programmers	715	51-4012
Nursing Aides, Orderlies, & Attendants	373	31-1012
Nursing Instructors & Teachers, Postsecondary	225	25-1072
Obstetricians & Gynecologists	326	29-1064
Occupation Unknown	882	99-9999
Occupational Health & Safety Specialists	363	29-9011
Occupational Health & Safety Technicians	364	29-9012
Occupational Therapist Aides	376	31-2012
Occupational Therapist Assistants	375	31-2011
Occupational Therapists	335	29-1122
Occupl Hlth & Safety Specs & Techs, All Other	365	29-9019
Office & Administrative Support Occupations	500	43-0000
Office & Administrative Support Workers, All Other	556	43-9199
Office Clerks, General	552	43-9061

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Office Machine Operators, Except Computer	553	43-9071
Operating Engineers & Oth Const Equipment Ops	592	47-2073
Operations Research Analysts	84	15-2031
Ophthalmic Laboratory Technicians	790	51-9083
Opticians, Dispensing	360	29-2081
Optometrists	321	29-1041
Oral & Maxillofacial Surgeons	316	29-1022
Order Clerks	524	43-4151
Orthodontists	317	29-1023
Orthotists & Prosthetists	361	29-2091
Outdoor Power Equipt & Other Small Eng Mechanic	664	49-3053
Packaging & Filling Machine Operators & Tenders	791	51-9111
Packers & Packagers, Hand	852	53-7064
Painters, Construction & Maintenance	600	47-2141
Painters, Transportation Equipment	793	51-9122
Painting, Coating, & Decorating Workers	794	51-9123
Paper Goods Machine Setters, Ops, & Tenders	803	51-9196
Paperhanglers	601	47-2142
Paralegals & Legal Assistants	197	23-2011
Parking Enforcement Workers	399	33-3041
Parking Lot Attendants	837	53-6021
Parts Salespersons	483	41-2022
Patternmakers, Metal & Plastic	728	51-4062
Patternmakers, Wood	764	51-7032
Paving, Surfacing, & Tamping Equipment Operators	590	47-2071
Payroll & Timekeeping Clerks	509	43-3051
Pediatricians, General	327	29-1065
Personal & Home Care Aides	471	39-9021
Personal Care & Service Occupations	440	39-0000
Personal Care & Service Workers, All Other	475	39-9099
Personal Financial Advisors	61	13-2052
Pest Control Workers	434	37-2021
Pesticide Handlers, Spray, & Applicators, Vegetation	436	37-3012
Petrol Pump System Ops, Refinery Ops, & Gaugers	775	51-8093
Petroleum Engineers	111	17-2171
Pharmacists	322	29-1051
Pharmacy Aides	384	31-9095
Pharmacy Technicians	353	29-2052
Philosophy & Religion Teachers, Postsecondary	236	25-1126
Photographers	309	27-4021
Photographic Process Workers	795	51-9131
Photographic Processing Machine Operators	796	51-9132
Physical Scientists, All Other	149	19-2099
Physical Therapist Aides	378	31-2022
Physical Therapist Assistants	377	31-2021
Physical Therapists	336	29-1123
Physician Assistants	331	29-1071
Physicians & Surgeons, All Other	330	29-1069
Physicists	142	19-2012
Physics Teachers, Postsecondary	215	25-1054

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Pile-Driver Operators	591	47-2072
Pipelayers	602	47-2151
Plant & System Operators, All Other	776	51-8099
Plasterers & Stucco Masons	604	47-2161
Plate & Coat Mach Set, Ops, & Tend, Metal & Plastic	737	51-4193
Plumbers, Pipefitters, & Steamfitters	603	47-2152
Podiatrists	332	29-1081
Police & Sheriff's Patrol Officers	400	33-3051
Police, Fire, & Ambulance Dispatchers	532	43-5031
Political Science Teachers, Postsecondary	220	25-1065
Political Scientists	161	19-3094
Postal Serv Mail Sort, Processors, & Processing	537	43-5053
Postal Service Clerks	535	43-5051
Postal Service Mail Carriers	536	43-5052
Postmasters & Mail Superintendents	34	11-9131
Postsecondary Teachers, All Other	241	25-1199
Pourers & Casters, Metal	726	51-4052
Power Distributors & Dispatchers	769	51-8012
Power Plant Operators	770	51-8013
Precision Instrument & Equipmt Repairers, All Other	684	49-9069
Prepress Technicians & Workers	743	51-5022
Preschool Teachers, Except Special Education	242	25-2011
Pressers, Textile, Garment, & Related Materials	747	51-6021
Printing Machine Operators	744	51-5023
Printing Workers, All Other	745	51-5099
Private Detectives & Investigators	403	33-9021
Probation Offcrs & Correctional Treatment Specialis	185	21-1092
Procurement Clerks	510	43-3061
Producers & Directors	284	27-2012
Production Occupations	694	51-0000
Production Workers, All Other	806	51-9199
Production, Planning, & Expediting Clerks	538	43-5061
Professional & Related Occupations	70	15-29-0000
Professional & Related Occupations	88	15-29-0000
Professional & Related Occupations, All Other	369	15-29-9999
Proofreaders & Copy Markers	554	43-9081
Property, Real Estate, & Community Assn Mgrs	35	11-9141
Prosthodontists	318	29-1024
Protective Service Occupations	387	33-0000
Protective Service Workers, All Other	408	33-9099
Psychiatric Aides	374	31-1013
Psychiatric Technicians	354	29-2053
Psychiatrists	328	29-1066
Psychologists, All Other	155	19-3039
Psychology Teachers, Postsecondary	221	25-1066
Public Address System & Other Announcers	294	27-3012
Public Relations Managers	10	11-2031
Public Relations Specialists	299	27-3031
Pump Operators, Except Wellhead Pumpers	854	53-7072
Purch Agents, Ex Wholesale, Retail, & Farm Prods	42	13-1023

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Purchasing Agents & Buyers, Farm Products	40	13-1021
Purchasing Managers	18	11-3061
Radar & Sonar Technicians	879	55-3017
Radiation Therapists	337	29-1124
Radio & Television Announcers	293	27-3011
Radio Mechanics	643	49-2021
Radio Operators	307	27-4013
Radiologic Technologists & Technicians	350	29-2034
Rail Car Repairers	661	49-3043
Rail Transportation Workers, All Other	830	53-4099
Rail Yard Engineers, Dinkey Operators, & Hostlers	826	53-4013
Railroad Brake, Signal, & Switch Operators	827	53-4021
Railroad Conductors & Yardmasters	828	53-4031
Rail-Track Laying & Maintenance Equipment Ops	621	47-4061
Real Estate Brokers	494	41-9021
Real Estate Sales Agents	495	41-9022
Receptionists & Information Clerks	526	43-4171
Recreation & Fitness Studies Teachrs, Postsecond	239	25-1193
Recreation Workers	473	39-9032
Recreational Therapists	338	29-1125
Recreational Vehicle Service Technicians	666	49-3092
Refractory Materials Repairers, Ex Brickmasons	677	49-9045
Refuse & Recyclable Material Collectors	856	53-7081
Registered Nurses	333	29-1111
Rehabilitation Counselors	178	21-1015
Reinforcing Iron & Rebar Workers	605	47-2171
Religious Workers, All Other	190	21-2099
Reporters & Correspondents	297	27-3022
Reservation & Trans Ticket Agents & Travel Clerks	527	43-4181
Residential Advisors	474	39-9041
Respiratory Therapists	339	29-1126
Respiratory Therapy Technicians	355	29-2054
Retail Salespersons	484	41-2031
Riggers	690	49-9096
Rock Splitters, Quarry	634	47-5051
Rolling Mach Setters, Ops, & Tends, Metal & Plastic	718	51-4023
Roof Bolters, Mining	635	47-5061
Roofers	606	47-2181
Rotary Drill Operators, Oil & Gas	627	47-5012
Roustabouts, Oil & Gas	636	47-5071
Sailors & Marine Oilers	831	53-5011
Sales & Related Occupations	477	41-0000
Sales & Related Workers, All Other	499	41-9099
Sales Engineers	496	41-9031
Sales Managers	9	11-2022
Sales Representatives, Services, All Other	489	41-3099
Sales Reps, Whlesale & Mfg, Tech & Scientific Prods	490	41-4011
Sales Reps, Whlsale & Mfg, Ex Tech & Scientific Prods	491	41-4012
Sawing Mach Setters, Ops, & Tenders, Wood	765	51-7041
Secondary School Teachers, Ex Special & Voc Ed	247	25-2031

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Secretaries, Admin Assist, & Oth Off Suprt Wrkers, All O	557	43-9999
Secretaries, Except Legal, Medical, & Executive	545	43-6014
Securities, Commodities, & Financial Serv Sales Agts	487	41-3031
Security & Fire Alarm Systems Installers	652	49-2098
Security Guards	405	33-9032
Segmental Pavers	623	47-4091
Self-Enrichment Education Teachers	253	25-3021
Semiconductor Processors	797	51-9141
Separate, Filter, Clarify, Precipitate, & Still Mach Se	778	51-9012
Septic Tank Servicers & Sewer Pipe Cleaners	622	47-4071
Service Occupations	370	31-39-0000
Service Occupations, All Other	476	31-39-9999
Service Station Attendants	838	53-6031
Service Unit Operators, Oil, Gas, & Mining	628	47-5013
Set & Exhibit Designers	280	27-1027
Sewers, Hand	751	51-6051
Sewing Machine Operators	748	51-6031
Shampooers	462	39-5093
Sheet Metal Workers	607	47-2211
Ship Engineers	834	53-5031
Shipping, Receiving, & Traffic Clerks	539	43-5071
Shoe & Leather Workers & Repairers	749	51-6041
Shoe Machine Operators & Tenders	750	51-6042
Shuttle Car Operators	857	53-7111
Signal & Track Switch Repairers	691	49-9097
Skin Care Specialists	463	39-5094
Slaughterers & Meat Packers	709	51-3023
Slot Key Persons	442	39-1012
Social & Community Service Managers	36	11-9151
Social & Human Service Assistants	186	21-1093
Social Science Research Assistants	168	19-4061
Social Sciences Teachers, Postsecondary, All Other	223	25-1069
Social Scientists & Related Workers, All Other	162	19-3099
Social Work Teachers, Postsecondary	230	25-1113
Social Workers, All Other	183	21-1029
Sociologists	156	19-3041
Sociology Teachers, Postsecondary	222	25-1067
Soil & Plant Scientists	130	19-1013
Sound Engineering Technicians	308	27-4014
Special Ed Teachers, Preschool, Kindergarten, &	249	25-2041
Special Education Teachers, Middle School	250	25-2042
Special Education Teachers, Secondary School	251	25-2043
Special Forces	880	55-3018
Special Forces Officers	868	55-1017
Speech-Language Pathologists	340	29-1127
Stationary Engineers & Boiler Operators	771	51-8021
Statistical Assistants	555	43-9111
Statisticians	85	15-2041
Stock Clerks & Order Fillers	540	43-5081
Stonemasons	581	47-2022

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Structural Iron & Steel Workers	608	47-2221
Structural Metal Fabricators & Fitters	701	51-2041
Substance Abuse & Behavioral Disorder Counselors	174	21-1011
Subway & Streetcar Operators	829	53-4041
Surgeons	329	29-1067
Surgical Technologists	356	29-2055
Survey Researchers	152	19-3022
Surveying & Mapping Technicians	125	17-3031
Surveyors	93	17-1022
Switchboard Operators, Including Answering Service	502	43-2011
Tailors, Dressmakers, & Custom Sewers	752	51-6052
Tank Car, Truck, & Ship Loaders	858	53-7121
Tapers	594	47-2082
Tax Examiners, Collectors, & Revenue Agents	66	13-2081
Tax Preparers	67	13-2082
Taxi Drivers & Chauffeurs	822	53-3041
Teacher Assistants	265	25-9041
Teachers & Instructors, All Other	254	25-3099
Teachers, Primary, Secondary, & Adult, All Other	255	25-3999
Team Assemblers	703	51-2092
Technical Writers	301	27-3042
Telecomm Equipt Install & Repair, Ex Line Install	644	49-2022
Telecommunications Line Installers & Repairers	679	49-9052
Telemarketers	497	41-9041
Telephone Operators	503	43-2021
Tellers	511	43-3071
Terrazzo Workers & Finishers	588	47-2053
Textile Bleaching & Dyeing Mach Ops & Tenders	753	51-6061
Textile Cutting Machine Setters, Ops, & Tenders	754	51-6062
Textile Knit & Weave Mach Setters, Ops & Tenders	755	51-6063
Textile Wind, Twist, & Draw Out Mach Set, Ops & Tend	756	51-6064
Textile, Apparel, & Furnishings Workers, All Other	760	51-6099
Therapists, All Other	341	29-1129
Tile & Marble Setters	586	47-2044
Timing Device Assemblers, Adjusters, & Calibrators	704	51-2093
Tire Builders	804	51-9197
Tire Repairers & Changers	667	49-3093
Title Examiners, Abstractors, & Searchers	200	23-2093
Tool & Die Makers	732	51-4111
Tool Grinders, Filers, & Sharpeners	738	51-4194
Tour Guides & Escorts	466	39-6021
Traffic Technicians	839	53-6041
Training & Development Managers	15	11-3042
Training & Development Specialists	50	13-1073
Trans & Material Moving Occupations, All Other	860	53-9999
Trans Attendants, Ex Flight Attendants & Bag Porters	469	39-6032
Transit & Railroad Police	401	33-3052
Transportation & Material Moving Occupations	807	53-0000
Transportation Inspectors	840	53-6051
Transportation Workers, All Other	841	53-6099

## Alphabetical Index of Occupations

OCCUPATION	LINE NUMBER	CALIFORNIA SOC CODE
Transportation, Storage, & Distribution Managers	19	11-3071
Travel Agents	488	41-3041
Travel Guides	467	39-6022
Tree Trimmers & Pruners	437	37-3013
Truck Drivers, Heavy & Tractor-Trailer	820	53-3032
Truck Drivers, Light or Delivery Services	821	53-3033
Umpires, Referees, & Other Sports Officials	287	27-2023
Upholsterers	759	51-6093
Urban & Regional Planners	157	19-3051
Ushers, Lobby Attendants, & Ticket Takers	450	39-3031
Veh & Mobile Equipt Mechs, Install, & Repair, All Oth	668	49-3099
Veterinarians	342	29-1131
Veterinary Assistants & Lab Animal Caretakers	385	31-9096
Veterinary Technologists & Technicians	357	29-2056
Vocational Education Teachers, Middle School	246	25-2023
Vocational Education Teachers, Postsecondary	240	25-1194
Vocational Education Teachers, Secondary School	248	25-2032
Waiters & Waitresses	422	35-3031
Watch Repairers	683	49-9064
Water & Liquid Waste Treat Plant & System Ops	772	51-8031
Water Transportation Workers, All Other	835	53-5099
Weigh, Measure, Check, & Sample, Recordkeep	541	43-5111
Weld, Solder, & Braze Mach Setters, Ops, & Tenders	734	51-4122
Welders, Cutters, Solderers, & Brazers	733	51-4121
Wellhead Pumpers	855	53-7073
Wholesale & Retail Buyers, Except Farm Products	41	13-1022
Woodwork Mach Setters, Ops, & Tenders, Ex Sawing	766	51-7042
Woodworkers, All Other	767	51-7099
Word Processors & Typists	548	43-9022
Writers & Authors	302	27-3043
Zoologists & Wildlife Biologists	134	19-1023